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March 15, 2010

President
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Attn: John Jones, Director, Regulatory Management

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USEPA Region 5
Mail Code HSR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604
Attn: Matt Ohl

Director, Remediation
Site Remediation Section
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
Attn: Nile Fellows

Subject: **United States of America, et al. vs. Reilly Tar & Chemical Corporation, et al.**
File No. Civ. 4-80-469
CD-RAP Section 3.4

Gentlemen:

Enclosed is the 2009 Annual Monitoring Report submitted pursuant to Section 3.4 of the Consent Decree-Remedial Action Plan in the above captioned matter. This report is issued by the City in accordance with Section 2(a) of the Reilly/St. Louis Park Agreement (Exhibit B to the Consent Decree).

Any questions regarding this submittal can be directed towards this office.

Sincerely,

William M. Gregg

William M. Gregg
Project Leader for the
City of St. Louis Park

Enclosure

cc: Scott Anderson, City of St. Louis Park

N:\PROJECTW\SLP\01620 SLP\01620-013,32,37 Reilly Site\Task 100 Annual Monitoring Rpt\AMR letter for 2009 report.doc

ANNUAL MONITORING REPORT
FOR 2009

SUBMITTED TO THE

REGIONAL ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

EXECUTIVE DIRECTOR
MINNESOTA POLLUTION CONTROL AGENCY

BY

THE CITY OF ST. LOUIS PARK, MINNESOTA

PURSUANT TO
CONSENT DECREE - REMEDIAL ACTION PLAN
SECTION 3.4

UNITED STATES OF AMERICA, ET AL.

vs.

REILLY TAR & CHEMICAL CORPORATION, ET AL.

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA
CIVIL NO. 4-80-469

MARCH 15, 2010

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APPENDICES

Please refer to the Guide to Appended Laboratory Results for all 2009 samples. This guide precedes the Appendices.

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1.0 INTRODUCTION

Pursuant to Section 3.4 of the Consent Decree - Remedial Action Plan (CD-RAP) in the case of the United States of America, *et al.* vs. Reilly Tar & Chemical Corporation, *et al.*, this report presents the results of all chemical analyses and water level measurements for calendar year 2009 that are not presented in previous reports.

The ground water monitoring conducted in 2009 was performed in accordance with the methods and procedures identified in the 2009 Sampling Plan. The City of St. Louis Park (City) has overall responsibility for conducting the ground water monitoring required by the CD-RAP. In accordance with the 2009 Sampling Plan, AECOM, Inc. (AECOM), formally known as ENSR, collected ground water samples from monitoring wells, and TestAmerica Laboratories, Inc. (TA) performed the analyses for PAH.

The 2009 monitoring data are presented separately for each aquifer, starting with the Mt. Simon-Hinckley Aquifer, which is the deepest aquifer below the ground surface, and ending with the Drift Aquifer, which is the uppermost aquifer monitored. A series of maps has been prepared to help present the monitoring data. Maps for the Prairie du Chien-Jordan, St. Peter, Platteville, and Drift Aquifers are contained in this report.

A series of tables has been prepared for each aquifer to help present the analytical results since 1988. These tables illustrate trends in PAH concentrations in the ground water for each monitoring well. The shaded tables represent wells that are no longer monitored as part of the Sampling Plan, were not scheduled to be sampled, or wells that were unavailable for sampling during the scheduled time.

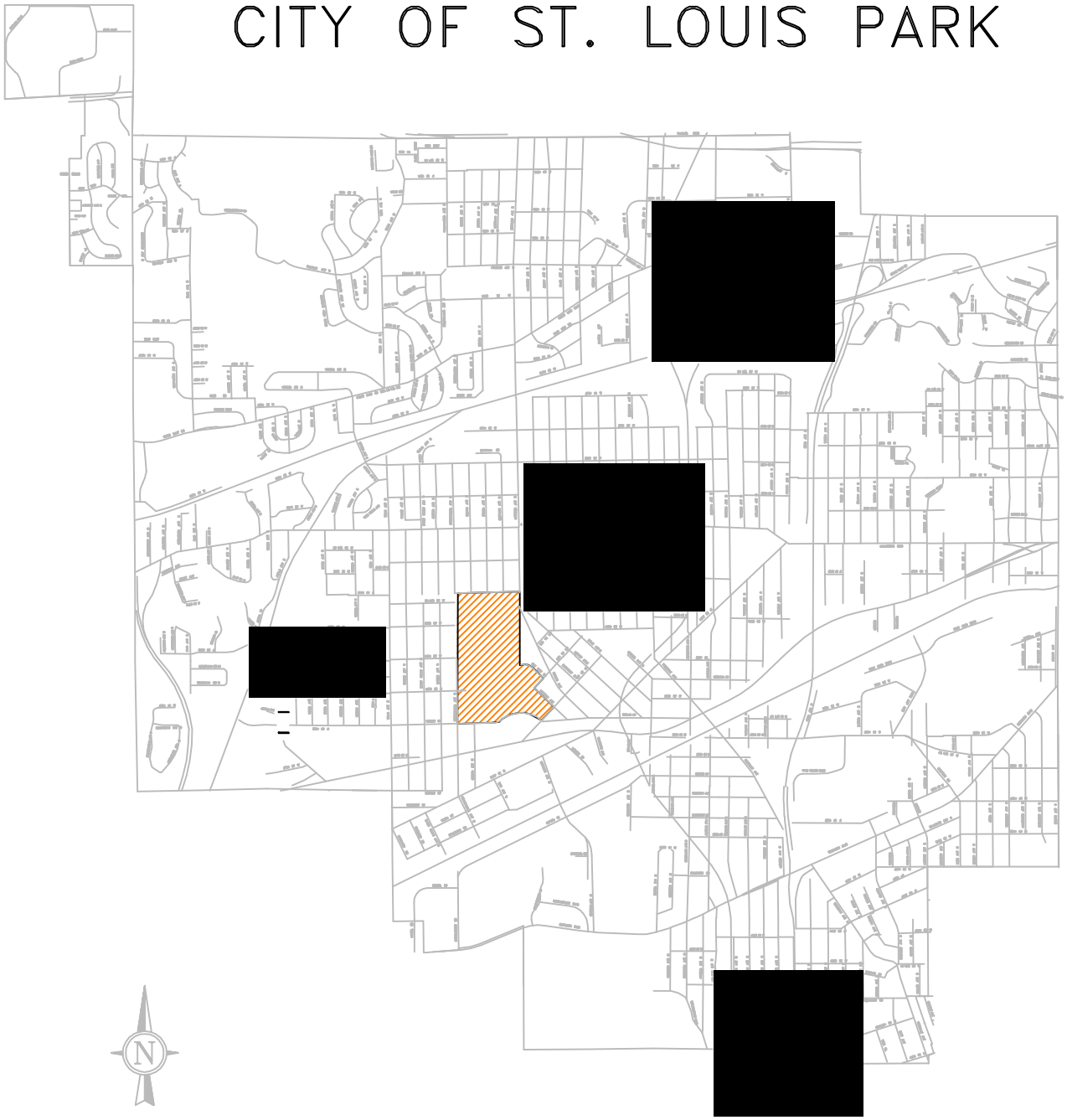
AECOM conducted a laboratory data review to assess the quality of the laboratory data. The data quality assessment (DQA) can be found in Section 9.0 of this report. Additionally, a total of four of the 14 data packages underwent full data validation. Each appendix includes a laboratory data package for a set of samples collected and submitted for analysis at the same time. Attached to the end of selected data packages are DQA reports summarizing the quality of the analytical data contained in each package. The data Appendices are organized chronologically throughout the year, as shown in the Guide to Appended Laboratory Results immediately preceding the Appendices.

2.0 MT. SIMON-HINCKLEY AQUIFER

St. Louis Park municipal water supply wells SLP11, SLP12, and SLP13 were sampled once in 2009. The 2009 analytical data for the Mt. Simon-Hinckley wells are shown on Figure 2-1. The laboratory reports of the analytical data are included in the Appendices. The Guide to Appended Laboratory Results for all of 2009 precedes the Appendices.

The advisory levels for the sum of benzo(a)pyrene and dibenz(a,h)anthracene, carcinogenic PAH, and Other PAH are 3, 15 and 175 nanograms/liter (ng/l or parts per trillion), respectively. Table 2-1 lists the historical results since 1988 of other PAH and carcinogenic PAH data collected from the three wells that are still in service. Well SLP17 has been out of service since 2000 and has not been sampled since then. The 2009 data indicate that the sums of the concentrations of benzo(a)pyrene and dibenz(a,h)anthracene, carcinogenic PAH, and other PAH in wells SLP11, SLP12, and SLP13 were below the advisory levels for these compounds. It appears that the Mt. Simon-Hinckley Aquifer has not been significantly affected by contaminants originating from the former Reilly Tar & Chemical Corporation (Reilly) site. Total Other PAH continues to decrease in these wells.

CITY OF ST. LOUIS PARK



REILLY SITE

WELL LOCATION
SLP 17 WELL IDENTIFICATION
WATER LEVEL
– SUM–BENZO(a)PYRENE & DIBENZ(a,h)ANTHRACENE (PPT)
– SUM–CARCINOGENIC PAH (PPT)
– SUM–OTHER PAH'S (PPT)

Concentration in nanograms per liter equivalent to parts per trillion

FIGURE 2–1

SUMMARY OF GROUNDWATER MONITORING RESULTS FOR MOUNT SIMON HINKLEY AQUIFER 2009

DRAWN:	A. TARARA	DATE:	03/10/10	REV:
CHECKED:	WMG	PROJECT:	60145681	AECOM

Table 2-1
Historical Summary of Other PAH and
CPAH Analytical Results
1988 through 2009

Mt. Simon SLP11,12,13,17

All concentrations reported in nanograms per liter (ng/l).

SLP11		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
6-88	0 [3]	42
6-89	0	34
3-90	Out of Service	
3-91	0	43
5-92	0	43
3-93	0	50
3-94	0	66
10-95	3	113
6-96	0	109
10-97	0	78
5-98	0	70
5-99	0	151
9-00	0	22
8-01	0	19
9-02	Out of Service	
8-03	46	37
2-04	0	26
3-04	0	22
8-04	0	24
9-05	0	27
5-06	3	25
5-07	0	29
8-08	0	28
5-09	0	10

SLP12		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
6-88	0	11
6-89	0	16
3-90	0	109
3-91	0	21
5-92	1	25
3-93	0	9
3-94	0	21
10-95	0	9
6-96	0	3
10-97	0	12
5-98	0	3
9-99	0	10
9-00	0	11
8-01	0	2
9-02	3	7
8-03	0	2
8-04	0	20
9-05	0	5
8-06	0	4
5-07	0	4
8-08	0	1
5-09	0	0

SLP13		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
6-88	0	15
6-89	0	9
3-90	0	14
3-91	0	13
5-92	2	11
6-93	0	11
12-94	0	28
10-95	0	9
6-96	0	5
10-97	0	22
5-98	0	4
5-99	0	15
9-00	0	6
8-01	0	0
9-02	0	0
8-03	0	0
8-04	Out of Service	
9-05	0	10
5-06	3	8
5-07	0	5
8-08	0	11
5-09	0	0

SLP17		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	12
6-89	0	12
6-90	1	18
3-91	0	41
11-92	3	41
6-93	0	12
12-94	4	35
10-95	0	8
6-96	0	5
10-97	62	406
5-98	0	3
5-99	0	40
9-00	Out of Service	

[1] Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene	chrysene	quinoline*
benzo(a)pyrene	dibenzo(a,h)anthracene	benzo(j)fluoranthene**
benzo(b)flouranthene	indeno(1,2,3-cd)pyrene	benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)flouranthene can not be consistently separated by the laboratory. Therefore, if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

[2] Total Other PAHs (as listed in the CD/RAP (A.1.2), consists of the sum of:

acenapthene	benzo(e)pyrene	2,3-dihydroindene	1-methylnaphthalene
acenaphthylene	benzo(b)thiophene	fluoranthene	2-methylnaphthalene
acridine	biphenyl	fluorene	naphthalene
anthracene	carbazole	indene	perylene
benzo(k)fluoranthene	dibenzothiophene	indole	phenanthrene
2,3-benzofuran			pyrene

[3] Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

3.0 IRONTON-GALESVILLE AQUIFER

Analytical results from ground water samples collected during 1987 through 1991 from well W105 had consistently met the criterion (less than 10 parts per billion [ppb] total PAH) for discontinuing the 25 gallons per minute (gpm) pumping rate. Therefore, in accordance with CD-RAP Section 6.1.5, the pump in well W105 was inactivated on December 23, 1991, and remains inactivated.

Ground water samples are required to be collected biannually from well W105. Well W105 was not required to be sampled during 2009, however, the 2008 sampling results exceeded the cessation criteria in well W105 and it was re-sampled according to Section 6.1.5 of the CD-RAP during March 2009. The sampling schedule for well W105 requires once per year during even-numbered years (i.e. 2010, 2012, and 2014).

The historical analytical results for well W105 from 1988 through 2009 are presented on Table 3-1. PAH concentrations in 2008 exceeded 14 ppb. The confirmation sampling conducted in 2009 indicated concentrations that were consistent with previous years (4ppb). No further sampling was required in 2009.

Table 3-1

Historical Summary of Other PAH and CPAH in Well W105
1988 Through 2009

All concentrations reported in nanograms per liter (ng/l).

W105		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
2-88	0 [3]	9,000
6-88	0	2,400
9-88	0	3,670
12-88	0	2,035
6-89	0	1,400
12-89	0	1,086
5-90	0	2,347
8-90	0	2,600
5-91	9.5	2,164
8-91	0	1,014
2-92	0	2,185
6-92	355	5,057
11-92	0	30,900
1-93	38	1,797
1-93	23	1,966
3-94	60	2,576
5-96	29	2,746
4-98	0	5,493
5-00	89	5,593
6-02	142	5,247
5-04	33	2,363
5-06	200	5,725
5-08	195	14,546
3-09	273	4,107
3-09	166	4,450

NOTES:

[1] Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1), consist of the sum of:

benzo(a) anthracene
benzo(a)pyrene
benzo(b)flouranthene
chrysene
dibenzo(a,h)anthracene
indeno(1,2,3-cd)pyrene
quinoline*
benzo(j)fluoranthene**
benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo-(j)flouranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

[2] Total Other PAHs (as listed in the CD/RAP (A.1.2)), consists of the sum of:

acenapthene
acenaphthylene
acridine
anthracene
benzo(k)fluoranthene
2,3-benzofuran
benzo(e)pyrene
benzo(b)thiophene
biphenyl
carbazole
dibenzofuran
dibenzothiophene
2,3-dihydroindene
fluoranthene
fluorene
indene
indole
1-methylnaphthalene
2-methylnaphthalene
naphthalene
perylene
phenanthrene
pyrene

[3] Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

4.0 PRAIRIE DU CHIEN-JORDAN AQUIFER

Prairie du Chien-Jordan Aquifer wells were monitored in accordance with the 2009 Sampling Plan. In addition to water quality monitoring, ground water elevations were measured at the Prairie du Chien-Jordan Aquifer wells on June 12th and September 1st, 2009. A total of 14 wells were used to collect ground water samples during 2009. The laboratory reports of the analytical data are included in the Appendices. The Guide to Appended Laboratory Results for all of 2009 precedes the Appendices.

Summaries of analytical data and ground water elevations for the sampling rounds are shown in Figures 4-1 and 4-2. The figures indicate that ground water flow in the Prairie du Chien-Jordan Aquifer is affected by pumping of some of these wells. Municipal wells (i.e. SLP10/15 and SLP4) pump at greater than 1,000 gpm and have a considerable effect on localized ground water flow. However, these wells systematically turn on and turn off; therefore, the general ground water flow is affected by which wells are pumping and at what rates. According to several literature resources, including the USGS (Water Supply Paper 2211, 1984), Norvitch and others (Water Resources Outlook of the Minneapolis and St. Paul Metropolitan Area, 1973), the general ground water flow in the Prairie du Chien-Jordan Aquifer is toward the east. Figures 4-1 and 4-2 indicate a snapshot in time of the ground water flow and are not indicative of the long-term flow.

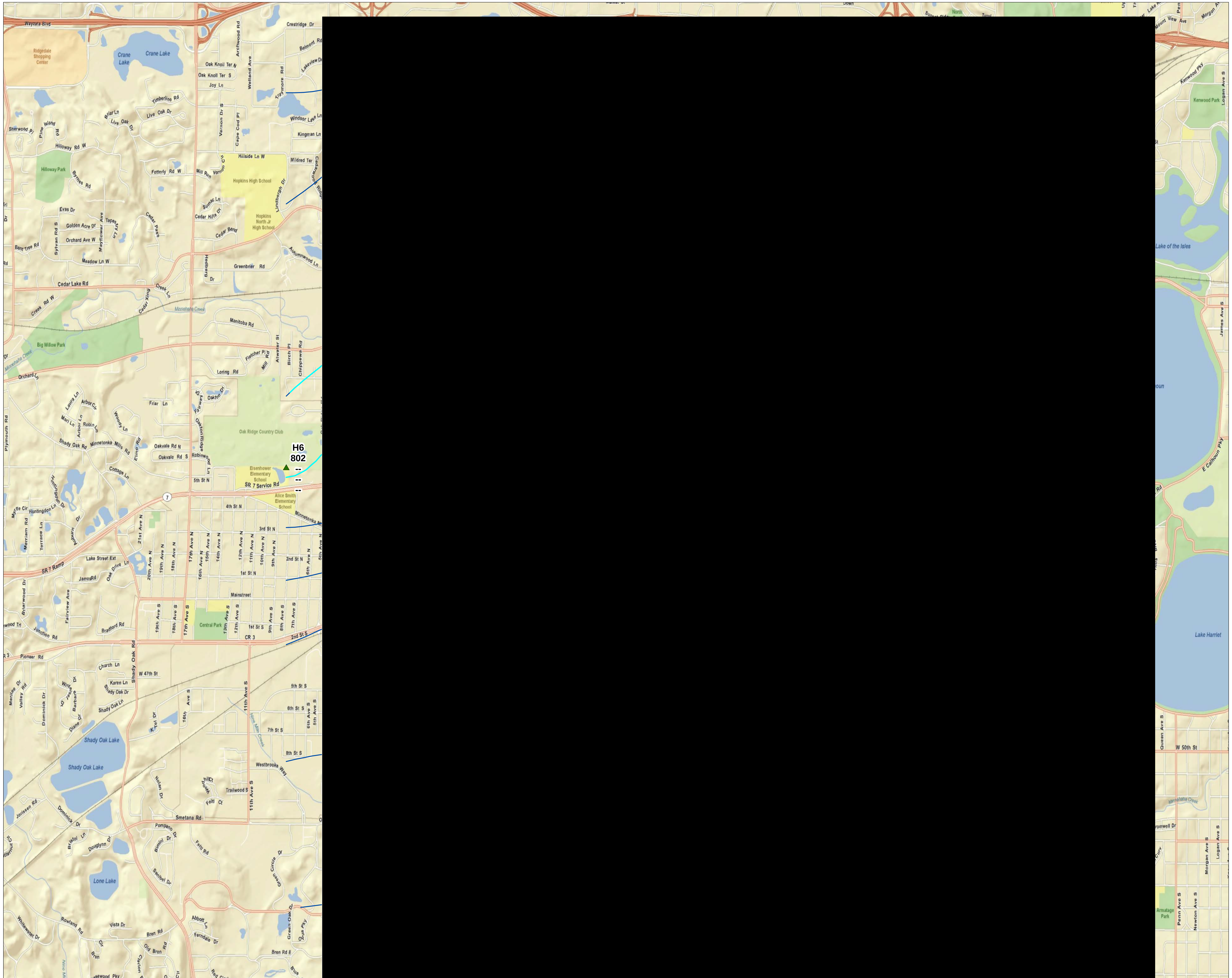
Table 4-1 presents a historical summary of analytical results from 1988 through 2009 for Prairie du Chien-Jordan Aquifer wells. An annual sample is collected from Well SLP10 or SLP15. In 2009, a sample was collected from SLP15. Wells SLP14, SLP16, and W405 or W406 are required to be sampled every other year. The recent sampling schedule has these wells sampled on even-numbered years (e.g., 2010, 2012, and 2014). A sample was not collected from these wells in 2009; therefore, these wells will be sampled again in 2010.

Edina municipal wells E2, E3 and E15 continue to indicate stable concentrations of PAH. Edina well E13 has been slowly, but steadily increasing in PAH concentrations since 1996. The sums of the concentrations of benzo(a)pyrene and dibenz(a,h)anthracene, carcinogenic PAH, and other PAH were below the drinking water criteria in all of the Prairie du Chien-Jordan Aquifer municipal supply wells during 2009.

Overall, carcinogenic PAH were detected in 4 of the 14 wells sampled. Concentrations of carcinogenic PAH ranged from 1 ng/l in wells W48 and W29 to 450 ng/l in W403.

The amount and distribution of PAH in the aquifer in 2009 was consistent with historical patterns and continues to show a stable or decreasing trend of PAH concentrations in most of the wells.

Well W403 exhibited higher than usual PAH concentrations in 2008. Data from the 2009 sampling event indicate well W403 is returning to more typical PAH concentrations. W403 is scheduled to be sampled again in 2010.



Well	WL	Bap + Dbaha	CPAH	OPAH
E13	758.6	0	0	168.7
E15	792.5	0	0	5.2
E2	786.3	0	0	7.85
E3	788.5	0	0	0
E4	710.6	--	--	--
E7	690.7	--	--	--
H6	802	--	--	--
SLP14	802.54	--	--	--
SLP15	735.48	0	0	156.7
SLP16	794.94	--	--	--
SLP4	742.57	0	0	107.1
SLP5	799.13	--	--	--
SLP6	--	0	0	144.3
SLP7	850.29	--	--	--
SLP8	776.27	--	--	--
W119	--	0	0	75.7
W23	797.51	17.6	365.3	14356.6
W29	--	0	1.2	26.6
W401	795.42	0	0	42.22
W402	794.05	0	0	149.1
W403	805.28	97	450	348.6
W406	795.28	--	--	--
W48	799.95	0	0	156.3

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and
Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

10 Foot Groundwater Level Contour

Reilly Site

N

0 1,000 2,000 4,000 6,000 Feet

Figure 4-1
Summary of Groundwater Monitoring Results
Prarie du Chien-Jordan Aquifer
First Half, 2009

AECOM

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Basemap © 2008 ESRI, AND, TANA, ESRI Japan, UNEP-WCMC

Well	WL	Bap + Dbaha	CPAH	OPAH
E13	755.3	--	--	--
E15	787	--	--	--
E2	764.6	--	--	--
E3	764.9	--	--	--
E4	697.4	--	--	--
E7	683.5	--	--	--
H6	803	--	--	--
SLP10	656.61	--	--	--
SLP14	605.54	--	--	--
SLP15	755.78	--	--	--
SLP16	744.84	--	--	--
SLP4	733.07	--	--	--
SLP5	798.43	--	--	--
SLP6	--	0	0	221.3
SLP7	795.99	--	--	--
SLP8	775.47	--	--	--
W119	--	0	0	124.3
W401	794.94	--	--	--
W402	790.25	--	--	--
W403	802.82	--	--	--
W406	791.78	--	--	--
W48	--	0	0.97	271.1

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

10 Foot Groundwater Level Contour

Reilly Site

0 1,000 2,000 4,000 6,000 Feet

Figure 4-2
Summary of Groundwater Monitoring Results
Prarie du Chien-Jordan Aquifer
Second Half, 2009

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AECOM

Table 4-1
Historical Summary of Other PAH and CPAH Analytical Results
1988 through 2009

Prairie du Chien-Jordan Aquifer Wells

All concentrations reported in nanograms per liter (ng/l)

SLP4

Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0 [3]	244
10-89	0	232
3-90	0	210
6-90	2	239
11-92	3	309
3-93	0	237
6-93	0	259
3-94	0	552
10-94	1	571
9-95	3	561
12-95	6	229
6-96	0	431
9-96	0	526
4-97	0	596
9-97	0	533
4-98	0	440
9-98	1	361
11-98	5	91
5-99	0	485
8-99	0	328
5-00	0	465
9-00	0	376
5-01	3	397
5-02	0	281
5-03	0	249
5-04	0	248
9-05	0	107
5-06	0	185
5-07	0	99
4-08	0	107
5-09	0	107

SLP14

Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	112
6-89	0	134
9-89	0	84
3-90	0	98
8-90	0	145
5-91	1	99
8-91	0	19
5-92	1	90
8-93	0	78
9-94	0	57
6-95	0	89
6-96	0	52
4-97	0	46
5-98	0	55
5-99	0	49
5-00	0	50
5-02	0	25
5-04	Out of Service	
5-06	82	17
7-06	0	14
8-06	0	19
8-08	0	28

SLP5

Sampling Date	Total CPAH[1]	Total Other PAH[2]
10-88	0	613
6-89	0	94
6-90	0	49
5-91	1	42
6-92	1	71
8-93	5	77

SLP8

Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	18
6-89	0	8
10-89	0	9
3-90	0	15
3-91	0	50
5-92	1	19
11-92	2	9

H3

Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	378
6-89	0	93
9-89	0	370
6-90	0	188
8-90	0	5,300
	Abandoned	

SLP10

Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	8,200
10-89	0	5,120
6-90	0	5,403
8-90	0	7,386
5-91	5	315
6-92	0	3,070
8-93	0	2,091
6-94	0	2,174
6-95	0	1,737
6-96	0	1,742
10-97	0	1,859
5-98	0	1,354
5-99	0	1,452
5-00	0	2,947
5-01	0	1,929
6-02	2	1,453
9-03	8	1,327
5-05	9	2,101
5-06	1	1,524
5-07	3	1,476
5-08	1	1,797

SLP6

Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	33
10-88	0	55
6-89	7	52
9-89	0	36
10-89	0	40
3-90	0	45
6-90	3	80
8-90	0	117
10-90	0	68
8-91	0	123
5-92	1	123
11-92	0	173
3-93	0	212
6-93	0	113
2-94	1	74
6-95	0	88
6-96	1	180
8-96	0	178
10-96	0	189
1-97	0	236
2-97	0	210
3-97	0	277
6-97	0	217
5-98	0	146
8-98	0	173
8-99	0	174
5-00	0	218
8-01	0	158
11-01	0	138
3-02	0	181
5-02	0	189
9-02	0	219
10-02	0	178
3-03	0	124
5-03	0	165
8-03	5	137
11-03	0	238
3-04	0	235
5-04	0	161
8-04	0	244
11-04	0	187
3-05	0	205
5-05	0	197
9-05	3	188
11-05	0	194
3-06	0	127
5-06	0	275
8-06	6	220
11-06	0	151
3-07	0	196
5-07	0	139
8-07	0	220
11-07	0	168
3-08	0	173
4-08	0	140
8-08	0	196
11-08	0	213
3-09	0	212
5-09	0	144
8-09	0	221
11-09	0	213

Table 4-1
Historical Summary of Other PAH and CPAH Analytical Results
1988 through 2009

Prairie du Chien-Jordan Aquifer Wells

All concentrations reported in nanograms per liter (ng/l)

SLP7		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	78
10-88	0	51
6-89	0	61
9-89	0	25
10-89	0	25
3-90	0	43
6-90	2	48
8-90	2	91
10-90	0	49
3-91	0	50
5-91	0	37
8-91	0	65
5-92	1	40
3-93	0	32
6-94	0	60
6-95	0	28
6-96	0	22
4-97	0	11
5-98	0	17
5-99	0	17
Out of Service		

SLP16		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	48
6-89	0	28
9-89	0	24
8-90	8	374
11-90	0	59
5-91	1	32
8-91	0	64
11-92	1	42
8-93	0	11
6-94	0	22
6-95	0	13
6-96	0	8
9-97	0	9
5-98	0	7
5-99	0	0
5-00	0	9
5-02	0	0
5-04	0	8
5-06	0	12
8-08	0	5

SLP15		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
6-89	0	4,026
11-92	0	3,206
8-93	0	2,091
5-04	0	168
5-09	0	157

E15		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	11
6-89	0	16
6-90	0	11
5-91	0	13
5-92	0	23
8-93	0	4
6-94	0	6
6-95	0	8
6-96	0	10
10-96	0	29
6-97	0	3
10-97	0	14
5-98	0	22
8-98	0	7
5-99	0	38
8-99	0	18
5-00	0	26
9-00	0	14
5-01	0	27
9-02	0	5
8-03	0	5
5-04	0	15
9-05	0	26
5-06	0	12
5-07	0	9
5-08	0	5
5-09	0	5

E13		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	4
6-89	0	20
9-89	0	6
6-90	0	13
8-90	2	227
5-91	1	11
8-91	0	12
5-92	0	43
8-93	0	4
6-94	0	3
6-96	0	3
10-96	0	4
4-97	0	38
10-97	0	8
5-98	0	21
8-98	0	36
5-99	0	15
8-99	0	35
5-00	0	39
9-00	0	49
5-01	0	41
5-02	0	80
8-03	7	87
5-04	0	116
9-05	0	208
10-05	0	169
11-05	0	172
5-06	0	112
5-07	9	155
5-08	0	158
5-09	0	169

E2		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	14
6-89	0	21
9-89	0	8
6-90	3	22
8-90	0	14
5-91	4	21
8-91	0	17
5-92	0	19
8-93	0	9
6-94	0	16
12-95	0	10
6-96	0	14
10-96	0	20
4-97	0	45
10-97	0	13
5-98	0	13
8-98	0	196
10-98	0	34
8-99	0	6
5-00	0	8
9-00	0	6
5-01	0	16
9-02	0	0
8-03	0	8
5-04	0	5
6-07	0	72
5-08	0	7
5-09	0	8

Table 4-1
Historical Summary of Other PAH and
CPAH Analytical Results
1988 through 2009

Prairie du Chien-Jordan Aquifer Wells

All concentrations reported in nanograms per liter (ng/l)

E3		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	15
6-89	0	15
6-90	1	17
8-91	0	13
5-92	4	21
8-93	0	5
6-94	0	7
6-95	0	8
6-96	0	3
6-97	0	4
5-98	0	3
5-99	0	0
5-00	0	0
5-01	0	16
5-02	0	0
8-03	0	1
5-04	0	4
9-05	0	5
5-06	0	8
5-09	0	0

H6		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	19
6-89	0	16
6-90	0	15
5-91	0	16
5-92	0	16
8-93	0	3
6-94	0	6
6-95	0	3
6-96	0	3
4-97	0	2
5-98	0	5
5-99	0	5
5-00	0	5
5-02	0	0
5-04	0	6
5-06	5	99
4-08	0	16

W119		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	3
6-89	0	18
9-89	0	11
9-01	0	294
Well Out of Service in 2002		
10-03	1	196
5-04	0	126
8-04	0	226
5-05	0	152
9-05	0	140
5-06	0	210
8-06	0	148
5-07	0	136
8-07	0	138
8-08	0	105
5-09	0	76
8-09	0	124

E7		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
6-96	0	3
10-96	0	5
6-97	0	3
10-97	0	2
5-98	0	1
8-98	0	6
5-99	0	5
8-99	0	2
5-00	0	16
9-00	0	9
5-01	0	22
5-02	0	29
8-03	0	22
5-04	Out of Service	

W48		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	2,418
6-89	0	1,636
9-89	0	1,850
10-89	0	1,130
3-90	0	1,690
6-90	0	1,809
8-90	22	4,566
8-93	2	428
6-94	1	285
6-95	3	310
6-96	3	259
6-97	0	316
10-97	0	290
5-98	0	186
8-98	0	50
5-99	0	226
8-99	0	226
5-00	0	222
9-00	0	130
5-01	0	234
8-01	0	149
11-01	0	180
3-02	0	222
5-02	0	185
9-02	0	138
10-02	0	187
3-03	0	108
5-03	0	135
8-03	0	135
10-03	0	173
3-04	0	156
5-04	0	189
8-04	0	161
11-04	0	170
3-05	0	144
5-05	0	141
9-05	0	82
11-05	0	156

MTK6		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	4
6-89	0	12
6-90	5	22
5-91	0	17
5-92	4	19
8-93	0	7
6-94	0	8
6-95	0	15
6-96	0	4
4-97	0	3
5-98	0	0
5-99	0	2
5-00	0	3
5-02	0	0
5-04	0	8
5-06	0	14
4-08	0	0

W48		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
3-06	0	154
5-06	0	111
8-06	0	169
11-06	0	53
3-07	0	154
5-07	1	114
8-07	0	156
11-07	0	147
3-08	0	132
5-08	0	144
8-08	0	191
11-08	0	176
5-09	0	156
8-09	0	271
11-09	1	225

Table 4-1
Historical Summary of Other PAH and CPAH Analytical Results
1988 through 2009

Prairie du Chien-Jordan Aquifer Wells

All concentrations reported in nanograms per liter (ng/l)

W23		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
9-88	0	111,100
12-88	0	123,100
3-89	0	120,200
6-89	0	117,600
9-89	0	106,300
3-90	0	129,100
8-90	0	114,700
3-91	0	87,800
6-91	0	71,800
9-91	0	91,200
10-91	0	82,600
2-92	0	67,600
9-92	0	78,000
6-94	0	60,000
10-94	0	64,000
5-95	4,000	128,000
9-95	0	70,000
4-96	0	48,000
7-96	0	50,000
4-97	0	34,000
10-97	0	47,000
2-98	0	0[3]
11-98	0	42,090
4-99	0	25,970
8-99	0	14,850
5-00	0	8,790
9-00	0	37,980
12-00	0	25,000
4-01	472	25,840
3-02	0	28,700
6-02	654	29,832
9-03	514	23,391
5-04	275	17,796
5-05	254	25,141
5-06	111	12,181
5-07	292	19,603
5-08	215	18,793
5-09	365	14,357

W401		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	12
6-89	0	15
6-90	0	27
5-91	0	28
5-92	0	10
8-93	1	10
6-94	0	8
6-95	0	16
6-96	0	19
10-96	0	29
6-97	0	174
10-97	0	121
5-98	0	66
8-98	0	5
5-99	0	64
8-99	0	23
5-00	0	105
9-00	0	158
5-01	0	295
5-02	0	149
8-03	0	60
5-04	0	195
10-05	0	92
5-06	0	48
5-07	0	41
4-08	0	35
5-09	0	42

W29		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	495
6-89	28	338
6-90	4	372
5-91	6	405
5-92	12	531
8-93	39	1,887
6-94	9	749
6-95	0	1,164
6-96	0	82
4-97	0	418
5-98	0	261
5-99	0	99
5-00	3	212
5-01	3	175
5-02	0	44
5-03	0	62
5-04	11	157
9-05	0	21
5-06	9	45
5-07	1	14
5-08	0	20
5-09	1	27

W40		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	1,062
6-89	0	540
6-90	16	705
5-91	5	474
5-92	2	283
8-93	5	345
6-94	0	484
6-95	0	369
6-96	0	498
4-97	0	624
5-98	0	220
5-99	0	299
5-00	2	129
5-01	7	390
Abandoned?		

W70		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	481
6-89	5	426
9-89	0	280
6-90	9	560
5-91	8	669
6-92	8	401
8-93	2	317
6-94	4	299
6-95	0	384
6-96	0	342
4-97	0	335
5-98	0	307
5-99	0	254
5-00	0	3
Well Out of Service in 2001, 2002		
5-03	0	0
8-04	Out of Service	
9-05	7	18
5-06	0	5
Abandoned in 2007		

Table 4-1
Historical Summary of Other PAH and
CPAH Analytical Results
1988 through 2009

Prairie du Chien-Jordan Aquifer Wells

All concentrations reported in nanograms per liter (ng/l)

W402		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
9-89	0	151
6-90	47	720
8-90	16	133
5-91	16	408
8-91	0	18,320
6-92	12	895
8-93	7	145
6-94	5	104
6-95	0	567
6-96	13	383
4-97	0	257
5-98	0	349
5-99	1	545
5-00	0	1,287
5-01	0	267
5-02	13	165
5-03	3	56
5-04	73	67
5-05	96	88
5-06	3	92
5-07	9	67
4-08	0	48
5-09	0	149

W403		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
8-88	0	57
6-89	40	974
9-89	0	177
8-90	49	1,102
5-91	110	976
8-91	0	11,570
6-92	19	816
8-93	7	516
6-94	7	1,271
6-95	0	543
6-96	3	182
4-97	0	172
5-98	0	11
5-99	0	169
5-00	0	195
5-01	0	458
5-02	3	134
5-03	125	66
5-04	131	88
9-05	4	83
5-06	2	74
5-07	302	304
5-08	1003	796
5-09	450	796

W406		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
6-89	0	36
10-89	0	26
6-90	8	43
8-90	15	119
5-91	1	30
8-91	1	40
5-92	6	53
8-93	0	22
6-94	0	31
6-95	0	34
6-96	0	21
4-97	0	27
5-98	0	15
5-99	0	28
5-00	0	30
5-02	Out of Service	
5-04	0	10
5-06	2	21
8-08	0	11

NOTES:

[1] Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a)anthracene
benzo(a)pyrene
benzo(b)flouranthene
chrysene
dibenz(a,h)anthracene
indeno(1,2,3-cd)pyrene
quinoline*
benzo(j)fluoranthene**
benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

[2] Total Other PAHs (as listed in the CD/RAP (A.1.2), consists of the sum of:

acenapthene
acenaphthylene
acridine
anthracene
benzo(k)fluoranthene
2,3-benzofuran
benzo(e)pyrene
benzo(b)thiophene
biphenyl
carbazole
dibenzofuran
dibenzothiophene
2,3-dihydroindene
fluoranthene
fluorene
indene
indole
1-methylnaphthalene
2-methylnaphthalene
naphthalene
perylene
phenanthrene
pyrene

[3] Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

5.0 ST. PETER AQUIFER

Nine St. Peter Aquifer wells were monitored in 2009 in accordance with the 2009 Sampling Plan. In addition to water quality monitoring, ground water elevations were measured in 10 St. Peter Aquifer wells on June 12th and September 1st, 2009. Summaries of analytical data and ground water elevations for the first and second half of 2009 are shown in Figures 5-1 and 5-2 respectively. Laboratory reports of the analytical data are included in the Appendices. The Guide to Appended Laboratory Results for all of 2009 precedes the Appendices.

The groundwater contours in Figures 5-1 and 5-2 are illustrated using the water level data collected in June and September. Well W410 was out of service for maintenance in the spring, but Figure 5-2 indicates the groundwater contours are influenced by the pumping at W410.

Total PAH concentrations have remained stable for wells W133 and W412. The total PAH concentrations indicate a downward trend in ground water samples collected from wells SLP3, W411, W24, W33R, W122, and W409. Concentrations of PAH in well W410 were higher than in previous years. Concentrations ranged from 32 ug/l to 62 ug/l in 2009. The previous high for this well was 21 ug/l in 1999. Historical PAH concentrations in well W409 (located up gradient) have had similar PAH concentrations to those detected in W410 in 2009. W410 appears to be capturing PAH migrating from the site as other wells located downgradient continue to show decreasing or stable concentrations of PAH.

Well	WL	Bap + Dbaha	CPAH	OPAH
SLP3	870.06	0	0	0
W122	857.38	0	0	328.8
W129	865.25	--	--	--
W133	861.05	0	0	855.9
W14	864.07	--	--	--
W24	862.23	0	0	25.8
W33R	863.99	4.7	45	882.5
W408	870.33	--	--	--
W409	880.5	0	0	1600
W410	--	0	0	32717.8
W411	860.61	0	0	113.5
W412	863.15	0	0	529.8

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

2 Foot Groundwater Level Contour

Reilly Site

0 1,000 2,000 Feet

Figure 5-1
Summary of Groundwater Monitoring Results
St Peter Aquifer
First Half, 2009

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AECOM

Well	WL	Bap + Dbaha	CPAH	OPAH
SLP3	875.36	0	0	0
W122	857.6	0	1.7	193.7
W129	865.14	--	--	--
W133	859.63	0	2.3	342.6
W14	863.64	--	--	--
W24	862.14	0	0	50.66
W33R	863.49	1.7	10.5	108.58
W408	870.15	--	--	--
W409	866.16	0	0	29000
W410	830.94	0	0	61812
W411	860.71	0	0	21.78
W412	863.29	0	0	449.6

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

5 Foot Groundwater Level Contour

Reilly Site

0 1,000 2,000 Feet

Figure 5-2
Summary of Groundwater Monitoring Results
St Peter Aquifer
Second Half, 2009

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AECOM

Table 5-1
Historical Summary of Other PAH and
CPAH Analytical Results
1988 Through 2009

St. Peter Aquifer Wells

All concentrations reported in nanograms per liter (ng/l).

SLP3		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	0 [3]	8
10-88	0	9
6-89	0	10
10-89	0	15
6-90	5	29
8-90	1	18
8-91	1	23
6-92	0	16
11-92	0	13
4-93	0	9
7-93	0	5
5-94	0	8
10-94	0	5
5-95	0	7
10-95	0	16
6-96	0	11
10-96	0	4
4-97	0	6
10-97	0	5
4-98	0	7
9-98	0	247
5-99	0	7
8-99	0	0
5-00	0	5
9-00	2	25
5-01	0	10
8-01	0	2
5-02	0	15
9-02	0	0
5-03	0	0
8-03	0	0
5-04	0	6
8-04	0	8
5-05	0	10
9-05	2	13
5-06	1	5
8-06	0	5
5-07	0	4
8-07	1	5
8-08	0	2
5-09	0	0
8-09	0	0

P116		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	8	196
10-88	0	3,770
6-89	1	82
10-89	3	42
8-90	2	20
4-91	0	61
8-91	3	40
6-92	13	118
11-92	10	219
4-93	4	52
7-93	2	38
5-94	1	64
11-94	0	66
5-95	0	50
10-95	0	53
6-96	0	7
10-96	0	43
4-97	0	35
10-97	0	82
4-98	5	148
9-98	0	60
5-99	4	50
8-99	0	55
5-00	2	36
Destroyed		

W122		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	21	142
10-88	0	2,246
6-89	20	965
10-89	15	114
4-91	36	757
8-91	10	853
6-92	43	568
11-92	7	179
4-93	32	308
7-93	24	330
5-94	23	583
10-94	10	374
5-95	0	281
10-95	11	220
6-96	0	144
10-96	0	235
4-97	0	256
10-97	0	243
4-98	7	370
9-98	0	99
5-99	0	71
8-99	7	46
5-00	39	65
9-00	6	142
5-01	0	92
8-01	0	24
5-02	0	92
9-02	5	73
5-03	29	73
8-03	6	134
5-04	100	69
8-04	1	79
5-05	78	88
9-05	6	78
5-06	8	63
8-06	1	88
5-07	13	79
8-07	9	54
5-08	11	104
8-08	0	95
5-09	0	329
8-09	2	194

W24		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	0	3,309
10-88	0	3,622
4-91	0	4,023
8-91	0	4,160
6-92	0	3,380
11-92	0	3,650
4-93	0	2,950
7-93	0	3,294
5-94	0	2,669
11-94	0	4,029
5-95	0	3,190
10-95	0	1,550
5-96	0	974
10-96	0	1,603
4-97	0	1,513
10-97	0	1,340
4-98	0	689
9-98	0	1,120
4-99	0	2,085
9-99	0	3,590
5-00	0	940
5-01	0	152
9-01	0	619
6-02	0	439
9-02	0	307
6-03	0	335
9-03	0	246
5-04	0	212
8-04	0	188
5-05	0	102
9-05	0	130
5-06	11	72
8-06	0	93
5-07	0	65
5-08	0	24
8-08	0	53
5-09	0	26
8-09	0	51

W129		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	0	88
10-88	0	290
6-89	0	27
10-89	0	43
6-90	0	143
8-90	0	96
4-91	27	159
8-91	0	430
6-92	47	247
11-92	5	296
4-93	15	121
7-93	2	53
5-94	0	171
11-94	2	110
5-95	12	94
10-95	0	55
6-96	0	53
10-96	0	75
4-97	0	104
10-97	0	181
4-98	9	88
9-98	0	8
5-99	1	79
8-99	0	80
5-00	26	223
9-00	8	150

Table 5-1
Historical Summary of Other PAH and
CPAH Analytical Results
1988 Through 2009

St. Peter Aquifer Wells

All concentrations reported in nanograms per liter (ng/l).

W133		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	0	52,370
10-88	0	29,830
6-89	0	37,870
10-89	0	21,099
6-90	0	19,448
8-90	0	14,030
4-91	5	2,587
8-91	0	4,610
6-92	0	2,453
11-92	0	1,920
4-93	0	1,134
7-93	0	836
5-94	5	665
10-94	0	434
5-95	0	165
10-95	0	157
5-96	0	142
10-96	0	285
4-97	0	241
10-97	0	108
4-98	0	88
9-98	0	299
4-99	7	633
9-99	0	190
5-00	0	167
9-00	0	327
5-01	0	156
8-01	0	40
5-02	0	904
9-02	0	338
5-03	6	114
8-03	11	411
5-04	0	905
8-04	84	186
5-05	50	1,617
9-05	9	434
5-06	15	1,988
8-06	0	463
5-07	0	552
8-07	14	730
5-08	23	182
8-08	0	567
5-09	0	856
8-09	2	343

W409		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	159	2,198
10-88	0	890
6-89	53	571
10-89	0	830
6-90	0	141
8-90	43	200
4-91	0	360
8-91	0	3,833
6-92	0	49,660
11-92	0	49,399
4-93	0	50,060
7-93	0	42,440
5-95	0	173,000
10-95	0	167,000
4-96	0	805,420
10-96	0	312,500
5-97	0	157,000
9-97	0	64,000
5-98	0	159,200
9-98	0	107,700
4-99	0	446,860
8-99	0	342,000
5-00	0	1,196,900
9-00	620	468,710
5-01	0	269,800
8-01	0	228,300
5-02	0	324,300
9-02	0	135,200
5-03	0	170,600
8-03	0	213,700
5-04	0	152,200
8-04	0	125,800
5-05	0	148,300
9-05	0	91,300
5-06	0	48,480
8-06	0	33,000
5-07	0	28,800
8-07	0	18,170
5-08	0	28,200
8-08	0	35,900
5-09	0	1,600
8-09	0	29,000

W410		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	0	1,288
10-88	0	1,435
6-89	5	424
10-89	0	357
4-91	0	85
8-91	0	5,330
2-92	0	14,070
6-92	0	12,850
11-92	0	16,470
4-93	0	17,600
7-93	0	16,609
5-94	0	14,505
10-94	0	20,880
5-95	0	21,640
10-95	0	13,940
5-96	0	15,970
10-96	0	14,170
4-97	0	14,690
10-97	0	10,150
4-98	0	8,620
5-98	0	1,900
9-98	0	9,690
11-98	0	5,942
3-99	0	8,780
4-99	0	21,606
9-99	0	8,780
11-99	0	3,800
2-00	0	4,750
5-00	0	6,502
9-00	0	6,269
12-00	0	1,500
3-01	0	2,940
5-01	0	6,217
9-01	0	2,854
3-02	0	2,090
6-02	0	2,142
9-02	0	3,327
6-03	0	4,593
9-03	0	4,332
5-04	0	4,489
8-04	0	7,086
5-05	0	7,701
9-05	0	10,553
5-06	0	9,545
8-06	0	8,359
5-07	0	17,690
5-09	0	32,718
8-09	0	61,812

W33R		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
5-07	14	778
5-08	2	497
8-08	15	182
5-09	45	883
8-09	11	109

W408		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	2	151
10-88	0	34
6-89	5	145
10-89	0	110
6-90	0	24
8-90	28	130
4-91	13	343
8-91	25	1,163
6-92	32	283
11-92	2	172
4-93	4	150
7-93	6	217
5-94	5	70
11-94	0	170
5-95	9	143
10-95	15	135
6-96	0	66
10-96	0	103
4-97	0	169
10-97	0	166
4-98	1	96
9-98	0	62
5-99	0	64
8-99	2	51
5-00	89	103
9-00	0	53

W14		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	57	95
10-88	0	439

Table 5-1
Historical Summary of Other PAH and
CPAH Analytical Results
1988 Through 2009

St. Peter Aquifer Wells

All concentrations reported in nanograms per liter (ng/l).

W411		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	0	1,274
10-88	0	1,161
6-89	8	200
10-89	0	460
6-90	15	451
8-90	0	336
4-91	12	384
8-91	0	251
6-92	24	313
11-92	1	181
4-93	7	189
7-93	5	113
5-94	3	120
11-94	6	219
5-95	6	235
10-95	1	183
6-96	0	79
10-96	0	253
4-97	0	82
10-97	3	253
4-98	1	120
9-98	61	424
5-99	0	99
8-99	0	79
5-00	0	56
9-00	17	138
5-01	0	124
8-01	0	46
5-02	0	34
9-02	0	16
5-03	38	113
8-03	0	57
5-04	97	107
8-04	0	90
5-05	43	75
9-05	3	76
5-06	1	56
8-06	0	68
5-07	4	84
8-07	1	93
5-08	0	84
8-08	0	95
5-09	0	114
8-09	0	22

W412		
Sampling Date	Total CPAH[1]	Total Other PAH[2]
7-88	8	1,309
10-88	0	209
6-89	18	211
10-89	0	132
8-90	1	484
4-91	48	1,470
8-91	0	5,283
6-92	12	1,319
11-92	0	3,796
4-93	154	842
7-93	16	777
5-94	25	291
10-94	10	538
5-95	18	369
10-95	0	402
5-96	0	139
10-96	0	1,620
4-97	0	806
10-97	0	614
4-98	30	260
9-98	60	557
4-99	20	267
9-99	0	764
5-00	250	105
9-00	1	164
5-01	4	363
8-01	0	1125
5-02	10	243
9-02	3	135
5-03	12	82
8-03	15	130
5-04	84	129
8-04	11	236
5-05	85	132
9-05	3	115
5-06	21	118
8-06	9	246
5-07	3	54
8-07	2	255
5-08	15	297
8-08	0	710
5-09	0	530
8-09	0	450

NOTES:

[1] Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

- benzo(a) anthracene
- benzo(a)pyrene
- benzo(b)flouranthene
- chrysene
- dibenz(a,h)anthracene
- indeno(1,2,3-cd)pyrene
- quinoline*
- benzo(j)fluoranthene**
- benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included with the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

[2] Total Other PAHs (as listed in the CD/RAP (A.1.2), consists of the sum of:

- acenapthene
- acenaphthylene
- acridine
- anthracene
- benzo(k)fluoranthene
- 2,3-benzofuran
- benzo(e)pyrene
- benzo(b)thiophene
- biphenyl
- carbazole
- dibenzofuran
- 2,3-dihydroindene
- fluoranthene
- fluorene
- indene
- indole
- 1-methylnaphthalene
- 2-methylnaphthalene
- naphthalene
- perylene
- phenanthrene
- pyrene

[3] Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

6.0 DRIFT-PLATTEVILLE AQUIFER SOURCE AND GRADIENT CONTROL WELLS

Ground water monitoring for the Drift and Platteville Aquifers in 2009 included quarterly PAH monitoring of well W420, an active Drift Aquifer source control well, and well W421, a Platteville Aquifer source control well. Ground water monitoring also included semi annual PAH monitoring of well W439, a Drift Aquifer gradient control well.

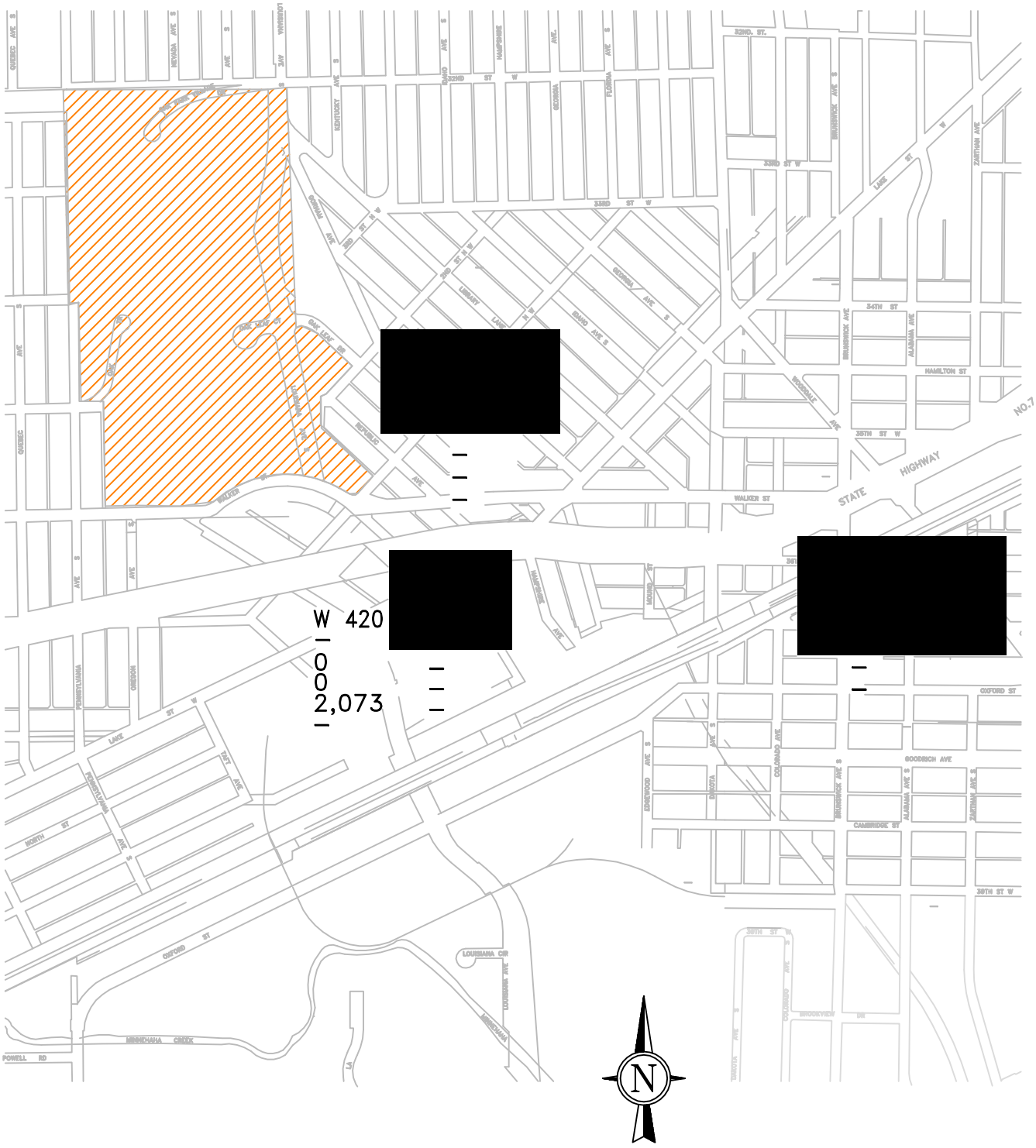
Wells W420 and W421 have been monitored quarterly since they began pumping in 1987. Well W439 was monitored quarterly for nine years since pumping began in early 1995 and well W434 was monitored quarterly for seven years since the pump was activated in June 1997. Beginning in 2004, ground water monitoring of wells W434 and W439 has been performed on a semi annual schedule.

The average pumping rates for wells W420, W421, and W439 were 50, 12, and 42 gpm, respectively in 2009. Well W421 was not pumping from January through April due to maintenance. The monitoring data are presented on Figures 6-1, 6-2, 6-3, and 6-4. The laboratory reports of the analytical data are included in the Appendices. Please refer to the Guide to Appended Laboratory Results for 2009 that precedes the Appendices to locate the individual sample results.

Carcinogenic PAH, Other PAH, and historical phenolic data for wells W420, W421, W434, and W439 are summarized in Table 6-1. The trends of these data suggest a stable or gradual decreasing trend in total PAH concentrations in the wells. Carcinogenic PAH are generally not detected in these wells, however, W421 had concentrations of carcinogenic PAH ranging from 14 ug/l to 171 ug/l in 2009. Wells W420, W421 and W439 are in close proximity to the former Reilly Site and have higher concentrations of PAH (e.g., approximately 0.5 to 3.5 parts per million total Other PAH).

The evaluation of the effectiveness of each source and gradient control well is provided in Sections 7.0 and 8.0 of this report.

CITY OF ST. LOUIS PARK



REILLY SITE

▲ WELL LOCATION
W420 WELL IDENTIFICATION
– WATER LEVEL
0 SUM–BENZO(a)PYRENE & DIBENZ(a,h)ANTHRACENE (PPB)
0 SUM–CARCINOGENIC PAH (PPB)
3,605 SUM–OTHER PAH'S (PPB)
– TOTAL PHENOLICS (PPB)

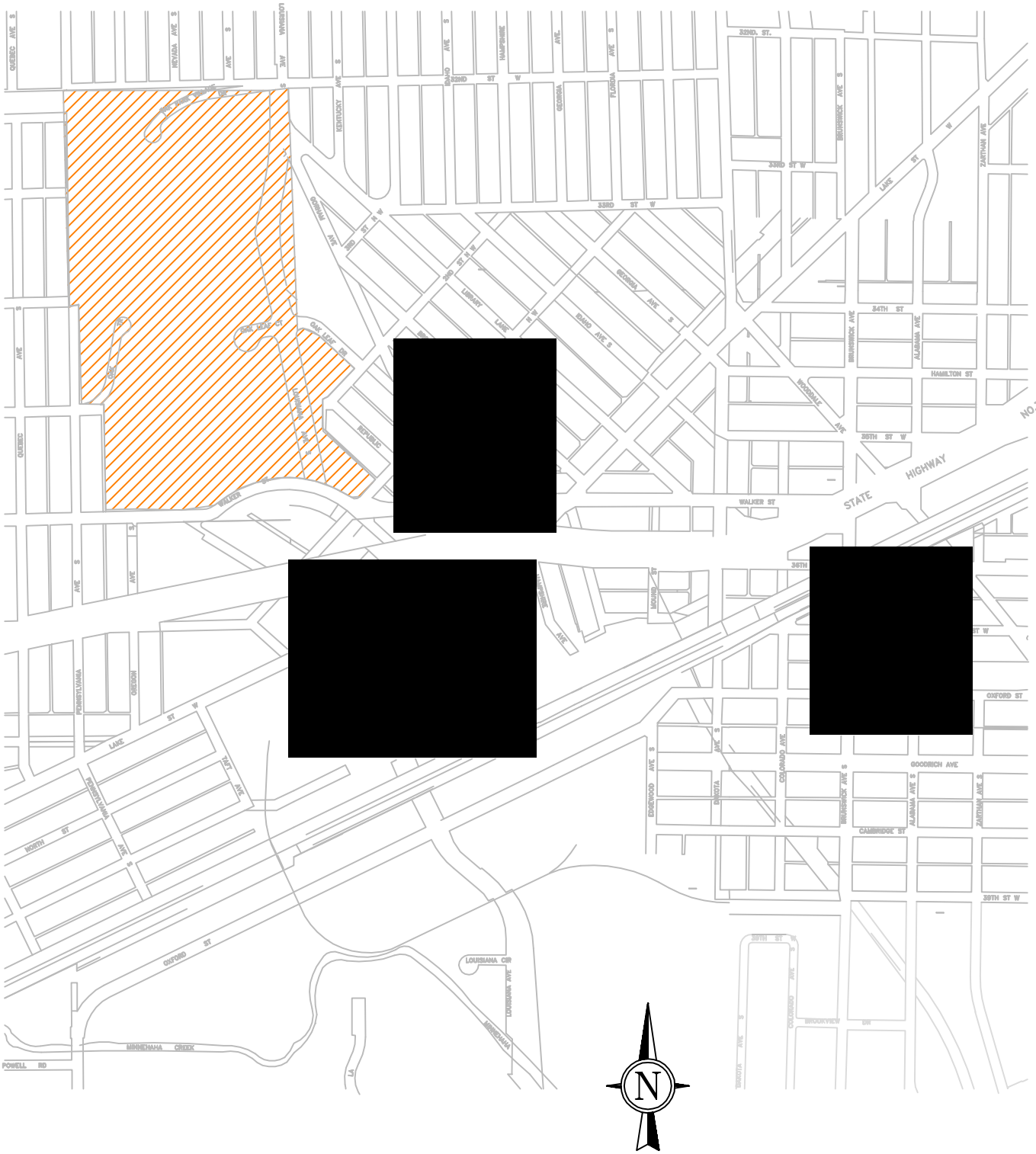
Concentration in micrograms per liter equivalent to parts per billion

FIGURE 6–1

SUMMARY OF GROUND WATER MONITORING RESULTS FOR DRIFT–PLATTVILLE AQUIFER MARCH 2009 FIRST QUARTER

DRAWN: A. TARARA	DATE: 03/10/10	RE	AECOM
CHECKED: WMG	PROJECT: 60145681		

CITY OF ST. LOUIS PARK



REILLY SITE

▲	WELL LOCATION
W420	WELL IDENTIFICATION
873.34	WATER LEVEL
0	SUM–BENZO(a)PYRENE & DIBENZ(a,h)ANTHRACENE (PPB)
0	SUM–CARCINOGENIC PAH (PPB)
3,511	SUM–OTHER PAH'S (PPB)
–	TOTAL PHENOLICS (PPB)

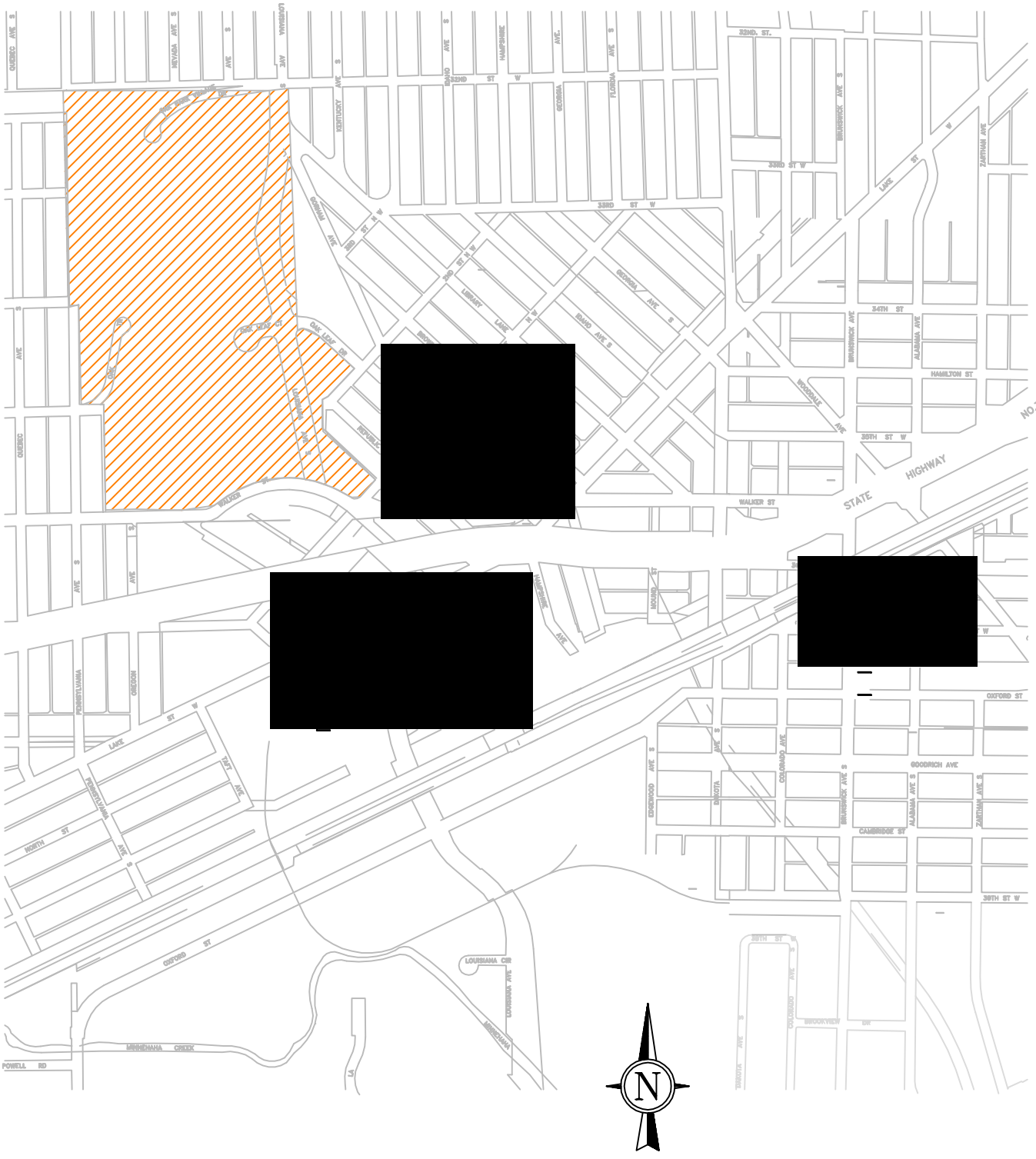
Concentration in micrograms per liter equivalent to parts per billion

FIGURE 6–2

SUMMARY OF GROUND WATER MONITORING RESULTS FOR DRIFT–PLATTVILLE AQUIFER APRIL 2009 SECOND QUARTER

DRAWN: A. TARARA	DATE: 03/10/10	REV:	AECOM
CHECKED: WMG	PROJECT: 60145681		

CITY OF ST. LOUIS PARK



REILLY SITE

▲	WELL LOCATION
W420	WELL IDENTIFICATION
868.79	WATER LEVEL
0	SUM–BENZO(a)PYRENE & DIBENZ(a,h)ANTHRACENE (PPB)
0	SUM–CARCINOGENIC PAH (PPB)
3,782	SUM–OTHER PAH'S (PPB)
–	TOTAL PHENOLICS (PPB)

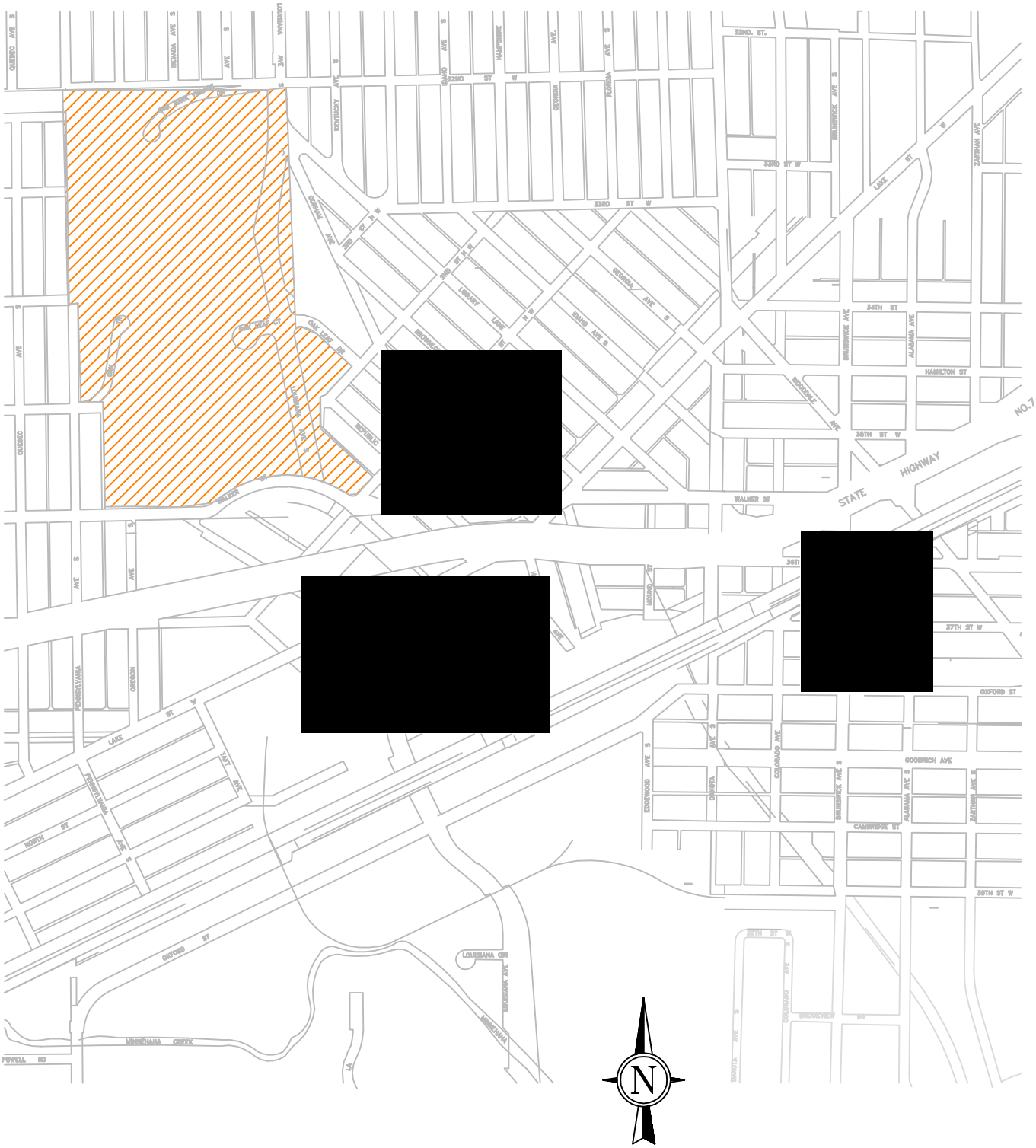
Concentration in micrograms per liter equivalent to parts per billion

FIGURE 6–3

SUMMARY OF GROUND WATER MONITORING RESULTS FOR DRIFT–PLATTVILLE AQUIFER AUGUST 2009 THIRD QUARTER

DRAWN: A. TARARA	DATE: 03/10/10	REV:	AECOM
CHECKED: WMG	PROJECT: 60145681		

CITY OF ST. LOUIS PARK



Concentration in micrograms per liter equivalent to parts per billion

FIGURE 6–4

SUMMARY OF GROUND WATER MONITORING RESULTS FOR DRIFT–PLATTVILLE AQUIFER NOVEMBER 2009 FOURTH QUARTER

DRAWN: A. TARARA	DATE: 03/10/10	REV:	AECOM
CHECKED: WMG	PROJECT: 60145681		

Table 6-1

Historical Summary of Other PAH and CPAH and Phenolics
Wells W420, W421, W434, and W439
1988 Through 2009

All concentrations in micrograms per liter (ug/l)

W420			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
1st Quarter	0 [3]	3,242	440
2nd Quarter	0	3,420	330
8-88	0	2,477	220
10-88	0	1,148	44
3-89	0	2,400	120
6-89	0	3,400	129
9-89	0	3,400	220
12-89	0	3,400	110
3-90	0	3,950	239
5-90	0	2,430	231
8-90	0	3,150	244
12-90	0	3,030	228
3-91	0	4,200	232
6-91	0	2,494	221
9-91	0	4,967	210
10-91	0	4,163	194
2-92	0	1,526	177
6-92	0	3,229	204
9-92	0	2,281	167
10-92	0	2,374	236
3-93	0	4,337	18
4-93	0	2,929	207
8-93	0	1,825	136
11-93	0	2,052	148
2-94	0	2,033	109
6-94	0	2,181	151
8-94	0	2,026	147
10-94	0	2,082	151
3-95	0	2,431	143
5-95	0	1,873	134
9-95	0	2,523	91
10-95	0	2,332	113
2-96	0	1,968	121
4-96	0	2,165	130
7-96	0	2,725	87
10-96	0	2,164	118
2-97	0	2,324	122
5-97	0	3,343	134
9-97	0	2,151	261
1-98	0	2,483	140
2-98	0	2,938	124
5-98	0	2,933	160
9-98	0	3,144	80
11-98	0	2,570	180
3-99	0	3,314	200
4-99	0	3,414	170
8-99	0	2,425	140
11-99	0	2,345	170
2-00	0	2,312	150
5-00	0	4,441	190
9-00	0	3,070	110
12-00	0	2,500	90

W420			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
3-01	0	3,680	110
5-01	0	6,956	300
8-01	0	2,535	140
10-01	0	3,608	190
3-02	0	8,578	110
5-02	0	4,163	NA
9-02	0	3,981	NA
10-02	0	3,456	NA
3-03	0	3,558	NA
5-03	0	4,122	NA
8-03	0	3,148	NA
11-03	0	2,835	NA
3-04	0	3,776	NA
4-04	0	3,805	NA
8-04	0	3,167	NA
11-04	0	4,685	NA
3-05	0	4,005	NA
5-05	0	2,463	NA
9-05	0	4,447	NA
11-05	0	4,205	NA
3-06	0	3,605	NA
5-06	0	3,511	NA
8-06	0	3,782	NA
11-06	0	3,682	NA
3-07	0	3,444	NA
5-07	0	3,029	NA
8-07	0	3,209	NA
11-07	0	3,539	NA
3-08	0	3,397	NA
4-08	0	3,514	NA
3-09	0	2,073	NA
5-09	0	3,168	NA
8-09	0	3,483	NA
11-09	0	3,492	NA

Table 6-1

Historical Summary of Other PAH and CPAH and Phenolics
Wells W420, W421, W434, and W439
1988 Through 2009

All concentrations in micrograms per liter (ug/l)

W421			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
1st Quarter	0	566	33
2nd Quarter	0	821	0
8-88	0	764	30
10-88	0	1,107	35
3-89	0	878	29
6-89	0	1,000	26
9-89	0	1,000	33
12-89	0	730	27
3-90	0	1,420	33
5-90	0	715	29
8-90	0	1,410	36
12-90	0	1,145	29
3-91	0	1,449	30
6-91	10	1,389	31
9-91	0	1,226	27
10-91	0	1,285	30
2-92	0	988	31
6-92	0	1,163	26
9-92	0	1,547	28
10-92	0	1,299	45
3-93	0	1,332	15
4-93	0	1,184	21
8-93	0	1,025	32
11-93	0	1,017	29
2-94	0	1,045	14
6-94	0	939	17
8-94	0	788	31
10-94	0	966	24
3-95	0	949	31
5-95	0	911	19
9-95	0	966	29
10-95	0	764	20
2-96	0	618	28
4-96	0	630	123
7-96	0	884	24
10-96	0	843	24
2-97	0	709	26
5-97	0	741	27
9-97	0	699	25
1-98	0	787	26
2-98	0	915	20
5-98	0	684	21
9-98	0	306	5
11-98	0	518	26
3-99	0	393	21
4-99	0	611	21
8-99	0	389	25
11-99	0	479	12
2-00	0	462	23
5-00	0	626	24
9-00	44	1,022	19
12-00	0	376	18

W421			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
3-01	8	341	21
5-01	7	717	29
8-01	31	415	23
10-01	36	266	27
3-02	6	557	7
5-02	3	410	NA
9-02	0	551	NA
10-02	5	530	NA
3-03	430	1,302	NA
5-03	310	2,112	NA
8-03	5	545	NA
11-03	715	4,396	NA
3-04	23	675	NA
4-04	0	619	NA
8-04	13	780	NA
11-04	18	995	NA
3-05	8	532	NA
5-05	0	518	NA
9-05	0	533	NA
11-05	6	407	NA
3-06	0	645	NA
5-06	0	539	NA
8-06	2	577	NA
11-06	2	596	NA
3-07	36	655	NA
5-07	9	608	NA
8-07	22	797	NA
11-07	7	682	NA
3-08	106	868	NA
4-08	38	648	NA
5-09	14	525	NA
8-09	140	1,307	NA
11-09	171	1,731	NA

Table 6-1

Historical Summary of Other PAH and CPAH and Phenolics
Wells W420, W421, W434, and W439
1988 Through 2009

All concentrations in micrograms per liter (ug/l)

W434			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
2-92	0	4	9
10-96	0	4	NA
4-97	0	7	NA
9-97[4]	0	5	8
10-97	0	3	NA
1-98	0	4	0
2-98	0	3	5
5-98	0	3	5
9-98	0	73	0
11-98	0	12	0
3-99	0	14	0
4-99	0	1	0
8-99	0	1	6
11-99	0	1	0
2-00	0	2	0
5-00	0	5	3
9-00	0.3	4	0
12-00	0	1	0
3-01	0	3	5
5-01	0	6	6
9-01	0	4	NA
10-01	0	4	5
3-02	0	5	25
5-02	0	5	NA
9-02	0	5	NA
5-03	0	4	NA
8-03	0	3	NA
5-04	0	6	NA
8-04	0	3	NA
5-05	0	3	NA
9-05	0	3	NA
5-06	0	3	NA
8-06	0	3	NA
5-07	0	2	NA
8-07	0	2	NA
5-08	0	2	NA
8-08	0	2	NA
5-09	0	0	NA

W439			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
3-95	0	3,933	91
5-95	0	4,053	74
9-95	0	2,564	54
10-95	0	2,115	50
2-96	0	1,552	46
4-96	0	1,419	43
7-96	0	1,765	43
10-96	0	1,557	45
2-97	0	1,277	43
5-97	0	1,683	48
9-97	0	1,547	42
1-98	0	1,236	34
2-98	0	1,377	31
5-98	0	1,221	35
9-98	0	978	12
11-98	0	954	53
3-99	0	1,385	29
4-99	0	1,278	31
8-99	0	755	45
11-99	0	1,123	17
2-00	0	1,081	31
5-00	0	1,975	31
9-00	0	1,859	26
12-00	0	1,187	37
3-01	0	1,498	34
5-01	0	1,623	37
8-01	0	1,056	NA
10-01	0	1,095	42
3-02	0	1,205	27
5-02	0	1,214	NA
9-02	0	1,027	NA
5-03	0	981	NA
8-03	0	1,535	NA
4-04	0	1,260	NA
8-04	0	1,800	NA
4-05	0	1,396	NA
9-05	0	1,303	NA
5-06	0	1,327	NA
8-06	0	1,015	NA
5-07	0	898	NA
8-07	0	963	NA
4-08	0	1,776	NA
5-09	0	1,144	NA
8-09	0	1,308	NA

[1] Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene	chrysene	quinoline*
benzo(a)pyrene	dibenz(a,h)anthracene	benzo(j)fluoranthene**
benzo(b)flouranthene	indeno(1,2,3-cd)pyrene	benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.
**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)flouranthene can not be consistently separated by the laboratory. Therefore, if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

[2] Total Other PAHs (as listed in the CD/RAP (A.1.2), consists of the sum of:

acenapthene	benzo(e)pyrene	2,3-dihydroindene	1-methylnaphthalene
acenaphthylene	benzo(b)thiophene	fluoranthene	2-methylnaphthalene
acridine	biphenyl	fluorene	naphthalene
anthracene	carbazole	indene	perylene
benzo(k)fluoranthene	dibenzothiophene	indole	phenanthrene
2,3-benzofuran			pyrene

[3] Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

[4] Pump was activated in W434 in June of 1997

NA = Not analyzed for identified compound class.

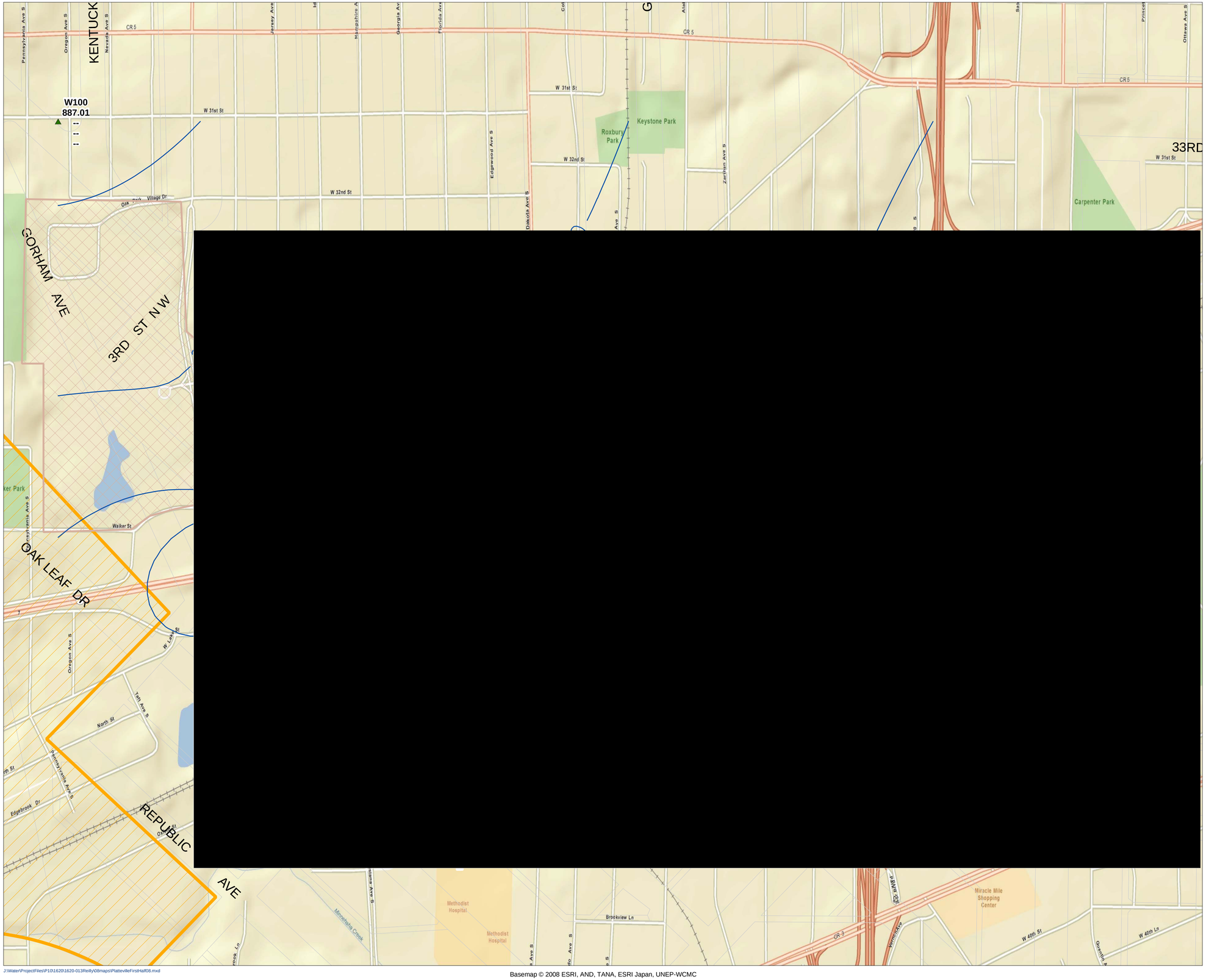
7.0 PLATTEVILLE AQUIFER

In accordance with the 2009 Sampling Plan, 12 Platteville Aquifer monitoring wells were sampled semi-annually in 2009. In addition to water quality monitoring, ground water elevations were measured in 20 Platteville Aquifer wells on June 12th and September 1st, 2009. Summaries of analytical data and ground water elevations for the first and second half of 2009 are shown in Figures 7-1 and 7-2 respectively. Laboratory reports of the analytical data are included in the Appendices. The Guide to Appended Laboratory Results for all of 2009 precedes the Appendices.

Table 7-1 is a historical summary since 1988 of Other PAH, carcinogenic PAH and phenolic data for Platteville Aquifer wells. The analytical results for all Platteville Aquifer wells are reported in micrograms per liter (ug/l), or parts per billion. The historical water quality data shown in Table 7-1 indicates a stable or decreasing trend in PAH concentrations in all Platteville Aquifer wells that were sampled in 2009. The 2009 water quality data for the Platteville Aquifer indicates little change in the overall distribution of PAH compared to prior years.

The water level contours in Figures 7-1 and 7-2 illustrate the regional east-southeast ground water flow direction. Well W421 appears to be controlling ground water in the bog between Walker and Lake Streets.

Concentrations of PAH were detected in five of the 12 Platteville Aquifer monitoring wells sampled in 2009. The highest concentration was 2,868 ug/l detected in well W437. Carcinogenic PAH concentrations were not detected in any of the 12 wells sampled during 2009.



Well	WL	Bap + Dbaha	CPAH	OPAH
W100	887.01	--	--	--
W101	876.03	0	0	0
W120	877.77	0	0	0
W121	872.21	--	--	--
W124	864.38	--	--	--
W130	871.34	--	--	--
W131	879.27	0	0	0
W143	877.09	0	0	0
W18	880.89	--	--	--
W20	876.24	0	0	0
W27	881.17	0	0	76000
W421	841.72	2400	13700	524600
W424	880.92	--	--	--
W426	866.39	0	0	140700
W428	879.11	0	0	0
W431	873.84	0	0	0
W433	877.81	0	0	0
W434	878.64	0	0	0
W437	880.78	0	0	2507400
W438	879.12	0	0	0

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

2 Foot Groundwater Level Contour

Reilly Site

N

0 1,000 2,000 Fee

Figure 7-1
Summary of Groundwater Monitoring Results
Platteville Aquifer
First Half, 2009

AECOM

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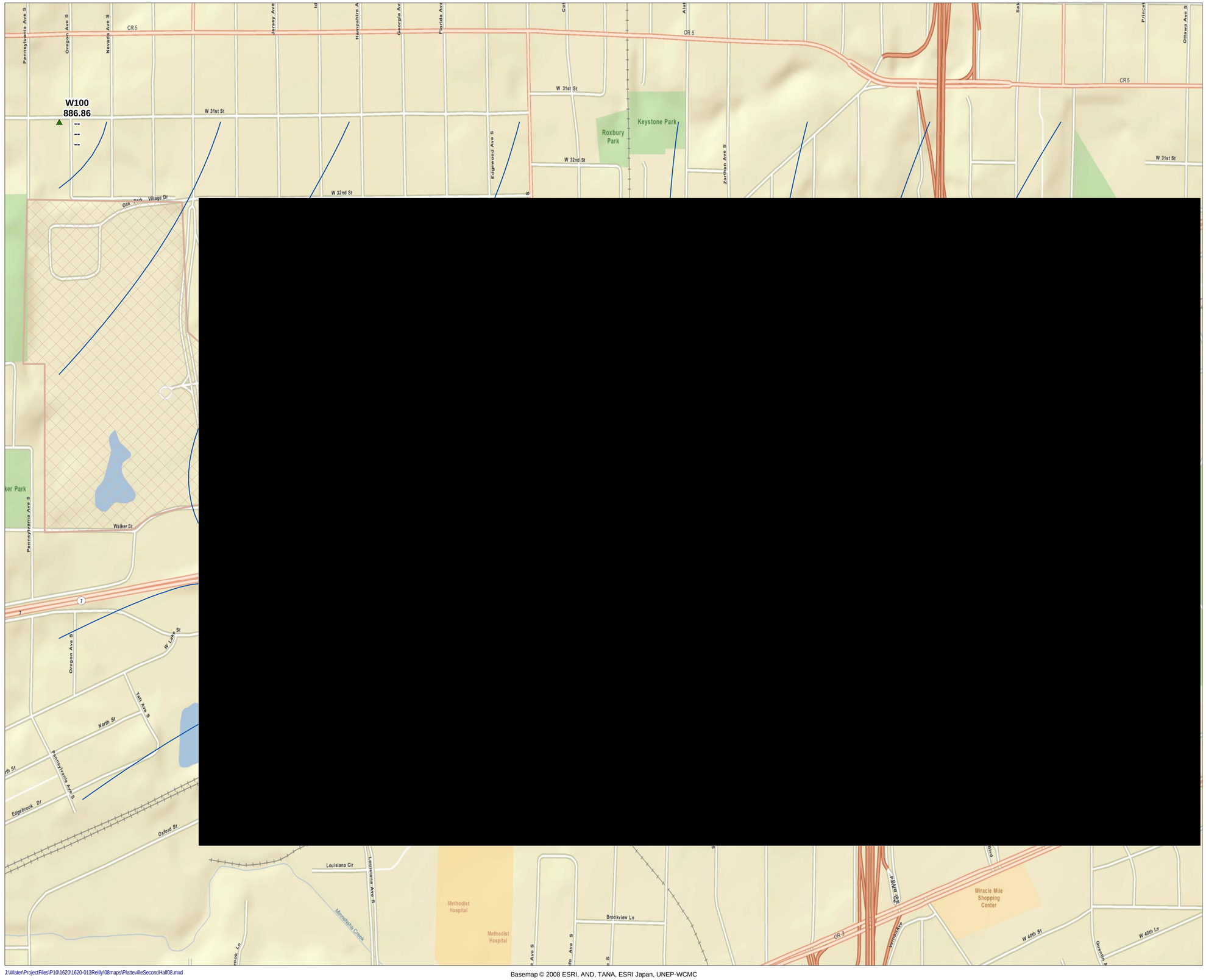

Well	WL	Bap + Dbaha	CPAH	OPAH
W100	886.86	--	--	--
W101	876.14	0	0	9700
W120	--	0	0	0
W121	872.16	--	--	--
W124	864.72	--	--	--
W131	879.47	0	0	0
W143	877.21	0	0	8300
W18	882.23	--	--	--
W20	875.83	0	0	0
W27	881.17	0	0	120700
W421	--	24000	139700	1306800
W424	879.9	--	--	--
W426	--	0	0	116300
W428	878.6	0	0	0
W431	--	0	0	0
W433	877.9	0	0	0
W434	878.69	--	--	--
W437	880.79	0	0	2867700
W438	--	0	0	0

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

2 Foot Groundwater Level Contour

Reilly Site

N

0 1,000 2,000 Feet

Figure 7-2
Summary of Groundwater Monitoring Results
Platteville Aquifer
Second Half, 2009

AECOM

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Table 7-1
Historical Summary of Other PAH, CPAH, and Phenolic Analytical Results
1988 Through 2009

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W18			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0 [3]	0	20
10-88	0	361	20
6-89	0	39	44
2-92	0	10	8
5-96	0	2	NA
9-96	0	2	NA
4-97	0	1	NA
9-97	0	1	NA
5-98	0	1	NA
9-98	0	0	NA
5-99	0	1	NA
9-99	0	1	NA
5-00	0	1	NA
9-00	0	1	NA

W130			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	0	0
10-88	0	0	0
6-89	0	0	0
5-90	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
10-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA

W27			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
10-88	0	1,882	NA
6-89	0	1,345	NA
5-96	0	1	NA
10-96	0	9	NA
4-97	0	281	NA
9-97	0	416	NA
4-98	0	184	NA
9-98	0	422	NA
4-99	0	312	NA
8-99	0	158	NA
5-00	0	415	NA
9-00	0	243	NA
5-01	0	199	NA
8-01[4]	0	99	NA
5-02	0	123	NA
9-02	0	193	NA
5-03	0	89	NA
8-03	0	85	NA
5-04	0	196	NA
8-04	0	116	NA
5-05	0	143	NA
9-05	0	106	NA
5-06	0	133	NA
8-06	0	118	NA
5-07	0	77	NA
8-07	0	97	NA
5-08	0	48	NA
8-08	0	109	NA
5-09	0	76	NA
8-09	0	121	NA

W19			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	0	0
10-88	0	0	35
6-89	0	0	26
2-92	0	0	0
5-94	0	0	0
5-96	0	0	NA
9-96	0	0	NA
4-97	0	0	NA
9-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA

W100			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
5-94	0	0	1

W131			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	0	0
10-88	0	0	13
6-89	0	0	0
2-92	0	13	0
5-94	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
10-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
5-01	0	0	NA
8-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
5-04	0	2	NA
8-04	0	3	NA
5-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	2	NA
5-07	0	0	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

W22			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
5-90	0	0	0
2-92	0	1	0
3-92	0	5	NA
5-96	0	0	NA
9-96	0	0	NA
4-97	0	2	NA
9-97	0	2	NA
4-98	0	1	NA
9-98	0	8	NA
4-99	0	22	NA
9-99	0	24	NA
5-00	0	3	NA
9-00	0	42	NA

W20			
Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	0	28
10-88	0	3	16
6-89	0	6	34
5-90	0	7	9
5-94	0	1	0
5-96	0	1	NA
9-96	0	1	NA
4-97	0	2	NA
10-97	0	2	NA
5-98	0	1	NA
9-98	0	0	NA
5-99	0	1	NA
9-99	0	1	NA
5-00	0	1	NA
9-00	0	1	NA
5-01	0	0	NA
8-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	6	NA
8-03	0	5	NA
5-04	0	2	NA
8-04	0	0	NA
5-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	4	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

Table 7-1
Historical Summary of Other PAH, CPAH, and Phenolic Analytical Results
1988 Through 2009

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W121

Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	0	73
10-88	0	0	35
6-89	0	0	35
5-90	0	0	0
5-94	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
10-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA

W124

Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	0	0
10-88	0	0	0
6-89	0	0	0
5-90	0	0	0
5-94	0	0	0
6-96	0	0	NA
9-96	0	0	NA
4-97	0	0	NA
10-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA

W437

Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
2-92	0	3,096	20
3-92	0	489	NA
5-01	0	6,305	NA
8-01[4]	0	5,342	NA
5-02	0	5,438	NA
9-02	0	5,292	NA
5-03	0	1,116	NA
8-03	0	5,977	NA
5-04	0	6,265	NA
8-04	0	4,553	NA
5-05	0	4,749	NA
9-05	0	5,802	NA
5-06	0	4,241	NA
8-06	0	5,443	NA
5-07	0	3,699	NA
8-07	0	3,703	NA
5-08	0	2,667	NA
8-08	0	3,520	NA
5-09	0	2,507	NA
8-09	0	2,868	NA

W1

Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	0	0
10-88	0	1	96
6-89	0	0	34
5-94	0	1	0
5-96	0	1	NA
9-96	0	0	NA
4-97	0	0	NA
9-97	0	1	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA

W101

Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	4	7
10-88	0	23	0
6-89	0	48	20
5-90	0	22	0
2-92	0	18	6
5-94	0	11	0
5-96	0	5	NA
10-96	0	32	NA
4-97	0	31	NA
9-97	0	15	NA
4-98	0	17	NA
9-98	0	125	NA
4-99	0	32	NA
9-99	0	24	NA
5-00	0	41	NA
9-00	0	32	NA
4-01	0	18	NA
9-01[4]	0	12	NA
5-02	0	17	NA
9-02	0	6	NA
5-03	0	14	NA
8-03	0	3	NA
5-04	0	19	NA
8-04	0	3	NA
5-05	0	3	NA
9-05	0	2	NA
5-06	0	2	NA
8-06	0	3	NA
5-07	0	8	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	10	NA

W426

Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	1	905	25
10-88	0	639	35
6-89	0	498	80
2-92	0	82	15
3-92	0	47	NA
5-96	0	55	NA
4-97	0	76	NA
9-97	0	64	NA
4-98	0	108	NA
9-98	0	1,508	NA
4-99	0	642	NA
8-99	0	258	NA
5-00	0	112	NA
9-00	0	160	NA
5-01	0	131	NA
8-01[4]	0	32	NA
5-02	0	564	NA
9-02	0	271	NA
5-03	0	574	NA
8-03	0	289	NA
5-04	0	636	NA
8-04	0	218	NA
5-05	0	601	NA
9-05	0	415	NA
5-06	0	259	NA
8-06	0	262	NA
5-07	0	301	NA
8-07	0	144	NA
5-08	0	147	NA
8-08	0	267	NA
5-09	0	141	NA
8-09	0	116	NA

W120

Sampling Date	Total CPAH[c]	Total Other PAH[c]	Total Phenolics
8-88	0	35	44
10-88	0	41	57
6-89	0	76	48
5-96	0	2	NA
10-96	0	11	NA
4-97	0	12	NA
9-97	0	6	NA
4-98	0	2	NA
9-98	0	4	NA
4-99	0	3	NA
9-99	0	2	NA
5-00	0	2	NA
9-00	0	2	NA
5-07	0	0	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

Table 7-1
Historical Summary of Other PAH, CPAH, and Phenolic Analytical Results
1988 Through 2009

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W132

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
5-90	0	1	0

W430

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
5-90	0	0	0

W428

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	0	0
10-88	0	1	8
6-89	0	1	16
5-90	0	0	0
2-92	0	2	6
3-92	0	9	NA
5-94	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
5-98	0	0	NA
9-98	0	1	NA
5-99	0	1	NA
9-99	0	0	NA
5-00	0	2	NA
9-00	0	1	NA
5-01	0	2	NA
8-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
5-04	0	0	NA
8-04	0	0	NA
5-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

W432

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
2-92	0	8	6
3-92	0	4	NA
5-96	0	1	NA
10-96	0	3	NA
4-97	0	10	NA
9-97	0	9	NA
4-98	0	9	NA
9-98	0	19	NA
4-99	0	33	NA
9-99	0	12	NA
5-00	0	13	NA
9-00	0	27	NA

W143

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	0	0
10-88	0	0	0
6-89	0	1	33
5-96	0	1	NA
10-96	0	1	NA
4-97	0	9	NA
9-97	0	1	NA
4-98	0	4	NA
9-98	0	10	NA
4-99	0	15	NA
9-99	0	4	NA
5-00	0	0	NA
5-01	0	5	NA
9-01[4]	0	3	NA
5-02	0	10	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
5-04	0	0	NA
8-04	0	3	NA
5-05	0	6	NA
9-05	0	2	NA
5-06	0	14	NA
8-06	0	3	NA
5-07	0	3	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	2	NA
5-09	0	0	NA
8-09	0	8	NA

W424

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	0	10
10-88	0	0.	0
6-89	0	1	17
5-90	0	0	0
2-92	0	5	0
3-92	0	11	0
5-94	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
9-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA

W431

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
2-92	0	4	0
3-92	0	2	0
5-96	0	1	NA
10-96	0	2	NA
4-97	0	1	NA
9-97	0	1	NA
5-98	0	1	NA
9-98	0	0	NA
5-99	0	1	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA
5-01	0	0	NA
8-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	6	NA
5-03	0	0	NA
8-03	0	0	NA
5-04	0	0	NA
8-04	0	0	NA
5-05	0	4	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

Table 7-1
Historical Summary of Other PAH, CPAH, and Phenolic Analytical Results
1988 Through 2009

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W438			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
2-92	0	20	5
3-92	0	0	NA
5-01	1	1	NA
9-01[4]	1	1	NA
5-02	0	5	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
5-04	0	0	NA
8-04	0	0	NA
5-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

W435			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
2-92	0	0	0
3-92	0	1	0

W433			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
5-96	0	0	NA
10-96	0	1	NA
4-97	0	0	NA
10-97	0	2	NA
5-98	0	1	NA
9-98	0	2	NA
4-99	0	3	NA
9-99	0	1	NA
5-00	0	1	NA
9-00	0	1	NA
5-01	0	1	NA
9-01*	0	1	NA
5-02	0	0	NA
9-02	0	3	NA
5-03	0	0	NA
8-03	0	0	NA
5-04		Not Available	
8-04	0	0	NA
5-05	0	0	NA
9-05	0	0	NA
5-06	0	3	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

NOTES:

[1] Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene
benzo(a)pyrene
benzo(b)flouranthene
chrysene
dibenz(a,h)anthracene
indeno(1,2,3-cd)pyrene
quinoline*
benzo(j)fluoranthene**
benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

[2] Total Other PAHs (as listed in the CD/RAP (A.1.2), consists of the sum of:

acenapthene
acenaphthylene
acridine
anthracene
benzo(k)fluoranthene
2,3-benzofuran
benzo(e)pyrene
benzo(b)thiophene
biphenyl
carbazole
dibenzofuran
dibenzothiophene
2,3-dihydroindene
fluoranthene
fluorene
indene
indole
1-methylnaphthalene
2-methylnaphthalene
naphthalene
perylene
phenanthrene
pyrene

[3] Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit, or were below 0.5 ug/l.

[4] For this report, the analytical results prior to 2002 have been rounded to the nearest part per billion.

NA = Not analyzed for identified compound class.

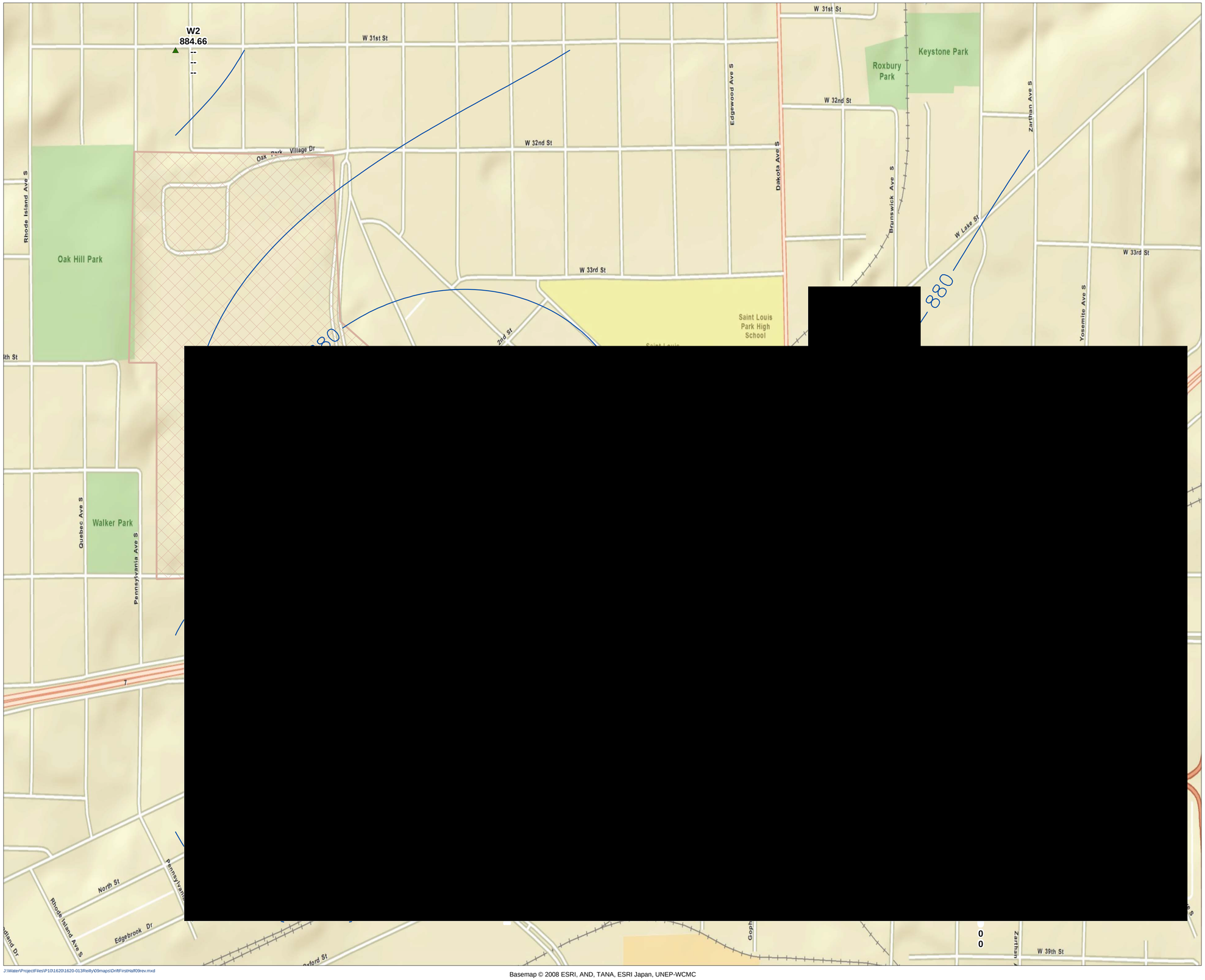
8.0 DRIFT AQUIFER

In accordance with the 2009 Sampling Plan, 12 Drift Aquifer monitoring wells were sampled semi-annually in 2009. In addition to water quality monitoring, ground water elevations were measured in the Drift Aquifer wells on June 12th and September 1st, 2009. Summaries of analytical data and ground water elevations for the first and second half of 2009 are shown in Figures 8-1 and 8-2, respectively. Laboratory reports of the analytical data are included in the Appendices. The Guide to Appended Laboratory Results for all of 2009 precedes the Appendices.

Table 8-1 is a historical summary since 1988 of Other PAH, carcinogenic PAH, and phenolic data for the Drift Aquifer wells. The 2009 analytical results for all Drift Aquifer wells are reported in micrograms per liter (ug/l), or parts per billion.

PAH concentrations were found in five of the 12 wells sampled in 2009. Concentrations ranged from 2 ug/l in well P310 to 46 ug/l in well P307. Carcinogenic PAH were not detected in any of the Drift Aquifer wells sampled in 2009. The historical water quality data shown in Table 8-1 indicates a stable or decreasing trend in PAH concentrations in all Drift Aquifer wells that were sampled in 2009. The 2009 water quality data for the Drift Aquifer indicates little change in the overall distribution of PAH compared to prior years.

The water level contours illustrated in Figures 8-1 and 8-2 illustrate the regional east-southeast ground water flow direction. The source control well W420 has historically captured the ground water flow beneath the bog area located between Lake Street and Walker Street. W439 historically has limited the further spread of PAH in the Northern Area of the Drift Aquifer.



Well	WL	Bap + Dbaha	CPAH	OPAH
P109	880.43	0	0	0
P112	879.02	0	0	0
P307	880.39	0	0	43300
P308	880.09	0	0	0
P309	879.95	0	0	15500
P310	879.15	0	0	1500
P312	877.74	0	0	0
W10	882.4	--	--	--
W117	876.7	0	0	0
W128	873.14	0	0	0
W136	880.55	0	0	0
W15	882.45	--	--	--
W2	884.66	--	--	--
W420	859.44	0	0	3168100
W422	876.15	0	0	7100
W427	879.1	0	0	0
W439	876.36	0	0	1144100
W9	880.73	--	--	--

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

2 Foot Groundwater Level Contour

Reilly Site

N

0 500 1,000 Feet

Figure 8-1
Summary of Groundwater Monitoring Results
Drift Aquifer
First Half, 2009

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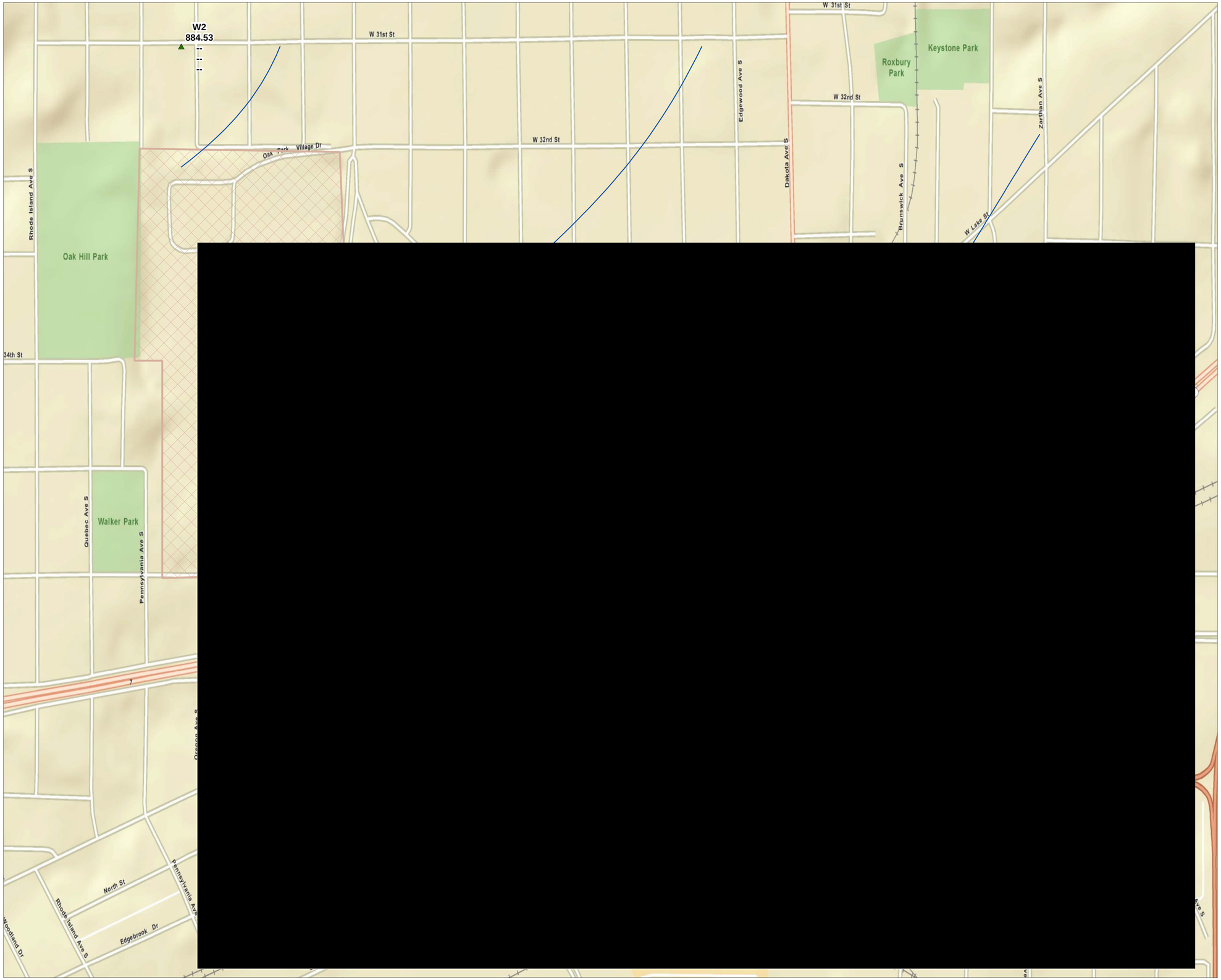
AECOM



Well	WL	Bap + Dbaha	CPAH	OPAH
P109	880.13	0	0	0
P112	879.2	0	0	0
P307	880.42	0	0	45800
P308	880.16	0	0	0
P309	880.01	0	0	10200
P310	879.23	0	0	0
P312	877.78	0	0	0
W10	882.74	--	--	--
W117	876.82	0	0	0
W128	873.03	0	0	0
W136	880.57	0	0	0
W15	882.3	--	--	--
W2	884.53	--	--	--
W420	--	0	0	3492300
W422	876.24	0	0	5400
W427	878.62	0	0	0
W439	--	0	0	1308200
W9	878.84	--	--	--

Well ID
Water Level (ft)
Sum of Benzo(a)Pyrene and Dibenz(a,h)anthracene (ppt)
Total Carcinogenic PAH (ppt)
Total Other PAH (ppt)
0 = Not detected
- = Not sampled

2 Foot Groundwater Level Contour

Reilly Site

N

0 500 1,000 Feet

Figure 8-2
Summary of Groundwater Monitoring Results
Drift Aquifer
Second Half, 2009

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AECOM

Table 8-1
Historical Summary of Other PAH, CPAH, and Phenolic Analytical Results
1988 Through 2009

Drift Aquifer Wells

PAH concentrations in micrograms per liter (ug/l).
Phenolic concentrations in micrograms per liter (ug/l).

P109

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0 [3]	3	8
10-88	0	4	0
6-89	0	4	15.5
5-90	0	5	0
4-01	0	1	NA
9-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
4-04	0	0	NA
8-04	0	0	NA
4-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
4-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

W11

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	13	7.1
10-88	0	37	7.2
6-89	0	147	22.1
5-01	0	0	NA
Well Abandoned in 2001			

P307

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
4-91	0	226	18.5
8-01[4]	0	76	NA
5-02	0	42	NA
9-02	0	89	NA
5-03	0	42	NA
8-03	0	60	NA
4-04	0	52	NA
8-04	0	68	NA
4-05	0	110	NA
9-05	0	122	NA
5-06	0	27	NA
8-06	0	140	NA
5-07	0	97	NA
8-07	0	78	NA
4-08	0	63	NA
8-08	0	41	NA
5-09	0	43	NA
8-09	0	46	NA

P112

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	0	0
10-88	0	0	8.6
6-89	0	0	35.7
5-90	0	0	0
2-92	0	0	0
5-01	0	0	NA
8-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
4-04	0	0	NA
8-04	0	0	NA
4-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
4-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

P308

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
4-91	0	98	10.5
2-92	0	0	11.7
10-94	0	41	NA
5-01	0	2	NA
8-01[4]	0	12	NA
5-02	0	3	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
4-04	0	0	NA
8-04	0	2	NA
4-05	0	0	NA
9-05	0	0	NA
5-06	0	5	NA
8-06	0	0	NA
5-07	0	9	NA
8-07	0	4	NA
4-08	0	1	NA
8-08	0	1	NA
5-09	0	0	NA
8-09	0	0	NA

P309

Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
6-89	0	1	0
4-91	0	318	22.5
5-01	0	27	NA
8-01[4]	0	40	NA
5-02	0	50	NA
9-02	0	24	NA
5-03	0	91	NA
8-03	0	43	NA
4-04	0	38	NA
8-04	0	35	NA
4-05	0	75	NA
9-05	0	57	NA
5-06	0	47	NA
8-06	0	31	NA
5-07	0	47	NA
8-07	0	26	NA
4-08	0	20	NA
8-08	0	21	NA
5-09	0	16	NA
8-09	0	10	NA

Table 8-1
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2009

Drift Aquifer Wells

PAH concentrations in micrograms per liter (ug/l).
Phenolic concentrations in micrograms per liter (ug/l).

P310			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
4-91	0	33	8
5-01	0	13	NA
8-01[4]	0	31	NA
5-02	0	14	NA
9-02	0	10	NA
5-03	0	16	NA
8-03	0	18	NA
4-04	0	14	NA
8-04	0	37	NA
4-05	0	31	NA
9-05	0	28	NA
5-06	0	11	NA
8-06	0	15	NA
5-07	0	12	NA
8-07	0	9	NA
4-08	0	5	NA
8-08	0	8	NA
5-09	0	2	NA
8-09	0	0	NA

P312			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
4-91	0	14	13
2-92	0	23	15
4-01	0	3	NA
9-01[4]	0	4	NA
5-02	0	4	NA
9-02	0	5	NA
5-03	0	9	NA
8-03	0	32	NA
4-04	0	11	NA
8-04	0	4	NA
4-05	0	14	NA
9-05	0	7	NA
5-06	0	12	NA
8-06	0	6	NA
5-07	0	5	NA
8-07	0	7	NA
4-08	0	6	NA
8-08	0	4	NA
5-09	0	0	NA
8-09	0	0	NA

W117			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	2	8.3
10-88	0	18	0
6-89	0	28	13.5
5-90	0	29	10.5
2-92	0	1	0
5-94	0	5	0
10-94	0	2	NA
4-01	0	2	NA
9-01[4]	0	1	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
4-04	0	0	NA
8-04	0	0	NA
4-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
4-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

W136			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	0	50
10-88	0	0	0
6-89	0	1	0
2-92	0	1	0
5-94	0	0	0
10-94	0	0	NA
5-01	0	0	NA
8-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
4-04	0	0	NA
8-04	0	0	NA
4-05	0	0	NA
9-05	0	0	NA
5-06	0	2	NA
8-06	0	0	NA
5-07	0	10	NA
8-07	0	8	NA
4-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

Table 8-1
Historical Summary of Other PAH, CPAH, and Phenolic Analytical Results
1988 Through 2009

Drift Aquifer Wells

PAH concentrations in micrograms per liter (ug/l).
Phenolic concentrations in micrograms per liter (ug/l).

W128			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88[4]	0	0	12
10-88	0	0	0
6-89	0	0	0
5-07	0	0	NA
8-07	0	0	NA
4-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

W427			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
8-88	0	0	7
10-88	0	0	0
6-89	0	1	0
5-90	0	0	0
2-92	0	5	0
10-94	0	0	NA
5-01[4]	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
4-04	0	0	NA
8-04	0	0	NA
4-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
4-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA

W422			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
1st Quarter	0	27	11
2nd Quarter	0	57	0
8-88	0	77	24
10-88	0	50	84
3-89	0	50	11
6-89	0	50	14
9-89	0	60	20
12-89	0	50	13
3-90	0	75	21
5-90	0	60	14
8-90	0	90	14
12-90	0	60	18
4-91	0	67	13
9-91	0	-	17
10-91	0	88	18
2-92	0	121	16
6-92	0	872	-
9-92	0	91	9
10-92	0	89	28
3-93	0	94	0
4-93	0	96	10
8-93	0	81	16
11-93	0	74	16
2-94	0	61	0
6-94	0	66	7
8-94	0	66	30
10-94	0	59	11
3-95	0	54	11
5-95	0	62	5
9-95	0	53	14
10-95	0	29	10
2-96	0	24	12
4-96	0	26	11
7-96	0	26	9
10-96	0	23	8

W422			
Sampling Date	Total CPAH[1]	Total Other PAH[2]	Total Phenolics
2-97	0	21	9
5-97	0	20	11
9-97	0	19	18
1-98	0	18	11
2-98	0	21	6
5-98	0	17	9
9-98	0	7	0
11-98	0	13	9
3-99	0	20	0
4-99	0	14	8
8-99	0	13	10
11-99	0	13	4
2-00	0	12	10
5-00	0	19	10
9-00	0	13	5
12-00	0	6	4
5-01	0	19	5
9-01	0	13	-
10-01	0	7	5
3-02	0	15	11
5-02	0	15	NA
9-02	0	9	NA
5-03	0	9	NA
8-03	0	4	NA
4-04	0	4	NA
8-04	0	1	NA
4-05	0	7	NA
9-05	0	9	NA
5-06	0	7	NA
8-06	0	0	NA
5-07	0	6	NA
8-07	0	9	NA
4-08	0	28	NA
8-08	0	10	NA
5-09	0	7	NA
8-09	0	5	NA

[1] Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene
benzo(a)pyrene
benzo(b)flouranthene
chrysene
dibenz(a,h)anthracene
indeno(1,2,3-cd)pyrene
quinoline*
benzo(j)fluoranthene**
benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

[2] Total Other PAHs (as listed in the CD/RAP (A.1.2), consists of the sum of:

acenapthene
acenaphthylene
acridine
anthracene
benzo(k)fluoranthene
2,3-benzofuran
benzo(e)pyrene
benzo(b)thiophene
biphenyl
carbazole
dibenzofuran
dibenzothiophene
2,3-dihydroindene
fluoranthene
fluorene

[3] Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit, or were below 0.5 ug/l.

[4] For this report, the analytical results prior to 2002 have been rounded to the nearest part per billion.

NA = Not analyzed for identified compound class.

9.0 DATA QUALITY ASSESSMENT

In accordance with the 2009 Sampling Plan, all laboratory data packages underwent a data quality assessment (DQA) conducted by AECOM. The DQA is conducted to determine whether or not the reported laboratory data may be used for decision-making purposes. Results of the data quality assessment can be found at the end of each laboratory data package. The laboratory reports of the 2009 analytical data are included in the Appendices. The Guide to Appended Laboratory Results for all of 2009 precedes the Appendices.

The basis for the review, including the elements to be reviewed and applicable validation guidelines were defined in the Quality Assurance Project Plan (QAPP). The 2009 DQA was conducted as follows. The number of samples was checked to verify that the results corresponded to the analytical requests designated on the chain of custody. The chain of custody was examined to determine the completeness pertaining to sampling dates, times, quantities, and analyses performed. The sample holding times, preservation, and cooler temperatures were noted. The method blanks, field blanks, equipment blanks, and trip blanks were examined for any contamination problems. Surrogate spike recoveries were checked to confirm they were within the range determined by the QAPP quality control (QC) limits. Matrix spikes and laboratory control samples (LCS) were reviewed to confirm they meet the QC acceptance criteria. All duplicate samples were checked for precision. In addition, sample quantitation limits (SQLs) were compared to those required in the QAPP.

A full data validation was completed on four of fourteendata packages. The full data validation includes all of the items reviewed in the DQA plus a review of the gas chromatography/mass spectrometry (GC/MS) tuning, the initial and continuing calibrations, and internal standard performance.

All 14 of the 2009 laboratory data packages (labeled A through N) were reviewed by AECOM during the DQA. The data packages contain usable results for all wells that were sampled in 2009. One or more of the three surrogates used had recoveries lower than the stated laboratory QAPP control limits in eleven data packages. Therefore, any positive results for the samples with surrogates outside the control limits are estimated. Additionally, several of the data packages referenced the incorrect acceptance criteria for the surrogates. No action was taken other than instructing the lab to double check the QAPP to get the appropriate limits listed in the data packages. All estimated data are included as part of the PAH sums that constitute the Drinking Water Criteria and the Advisory Levels for this project. Because none of the samples exceeded the Drinking Water Criteria or the Advisory Levels based on the addition of the estimated data to the various PAH sums, the usability of the data is not compromised.

The holding times for aqueous PAH analysis require extraction to occur within seven days after collection. All sample holding times were met during 2009 with one exception. A sample from was lost during the extraction process and required a re-extraction. The re-extraction took place one day removed from the holding time. No action was taken due to this minor non-conformance.

In general, cooler temperatures were within the QAPP acceptance criteria of 4 ± 2º C. However, samples were recorded at temperatures below 2º C in four of the 15 data packages. No validation action was taken due to this minor nonconformance.

PAH were detected in the Method Blanks for two data packages at low concentrations. All results with Method Blank concentrations are qualified with a "B". All concentrations qualified with a B are included in the total PAH calculations.

No samples exceeded the action levels established for each compound (the action level is 5 times the concentration found in the blank) in any of the data packages that had Method Blank contamination.

Field Blank contamination is not used to qualify laboratory data in Region V. However, Field Blank contamination was found at low levels in eight of the 2009 data packages.

For all samples that were diluted for analysis, the Sample Quantitation Limits (SQLs) were checked to confirm they were adjusted accordingly.

Overall, the 2009 laboratory data was found to be usable for evaluating PAH concentrations in the ground water and decision-making purposes. The overall completeness goal of 95% established in the QAPP was fulfilled in 2009.

This project benefits from years of collecting high quality data in accordance with the Agency approved Sampling Plan and QAPP. Therefore, an additional measure of quality assurance is gained by comparing current analytical results to the historical analytical results. None of the 2009 analytical results suggested data quality problems..

Criteria for validation actions were specified in the QAPP, data review worksheets or the appropriate validation guidelines and were given precedence in that order. QAPP criteria were used for surrogate, MS/MSD, and LCS recoveries. Some of the recovery limits outlined in the QAPP were incorrectly stated in the laboratory data packages for certain compounds (Crysene, Benzo(a)pyrene, Fluorene). The laboratory will be notified for future reports. Additionally, the RPDs for MS/MSD analysis were incorrectly stated as 0-30 for all data packages. The QAPP

stated RPD is 0-25. No action was taken for this minor non-conformance, as the data is still considered to be valid.

The RPD for field duplicates listed in the QAPP is 30%. The laboratory reports list the RPD as 50%. The laboratory will be notified for future reports.

The 2009 sampling data has been reviewed and the QAPP goals for field and laboratory completeness have been met.

GUIDE TO APPENDED LABORATORY RESULTS FOR ALL 2009 SAMPLES

Well Name	Analysis	1st Quarter	Appendix ID	2nd Quarter	Appendix ID	3rd Quarter	Appendix ID	4th Quarter	Appendix ID
Ironton-Galesville Aquifer									
W105	PPT 5			26-Mar	B				
Mount Simon Hinckley Aquifer									
SLP 11	PPT 5			11-May	G				
SLP 12	PPT 5			11-May	G				
SLP 13	PPT 5			11-May	G				
SLP 17	PPT 5	Well not sampled-out of service							
Prairie du Chien-Jordan Aquifer									
SLP 4	PPT 5			6-May	E				
W 23	PPT 75			4-May	C				
SLP 4T	PPT 5	12-Mar	A	4-May	C	11-Aug	J	10-Nov	N
SLP 6	PPT 5	12-Mar	A	6-May	E	11-Aug	J	10-Nov	N
SLP 10T or 15T	PPT 5	12-Mar	A	4-May	C	11-Aug	J	Well not available for sampling	
SLP 10 or 15	PPT 75			4-May	C				
SLP 14	PPT 5	Sampled only during even numbered years							
SLP 16	PPT 5	Sampled only during even numbered years							
W 119	PPT 5	Well not available for sampling		11-May	G	12-Aug	M	Well not available for sampling	
W 402	PPT 5			6-May	E				
W 403	PPT 5			6-May	E				
W 405 or W 406	PPT 5	Sampled only during even numbered years							
W 29	PPT 5			6-May	E				
E 3	PPT5			6-May	E				
H 6	PPT 5	Sampled only during even numbered years							
MTKA 6	PPT 5	Sampled only during even numbered years							
W48	PPT 5	Well not available for sampling		11-May	G	11-Aug	J	10-Nov	N
W401	PPT 5			6-May	E				
E2	PPT 5			6-May	E				
E7	PPT5	Well not sampled-out of service							
E13	PPT 5			6-May	E				
E15	PPT 5			6-May	E				

GUIDE TO APPENDED LABORATORY RESULTS FOR ALL 2009 SAMPLES

Well Name	Analysis	1st Quarter	Appendix ID	2nd Quarter	Appendix ID	3rd Quarter	Appendix ID	4th Quarter	Appendix ID
St. Peter Aquifer									
SLP 3	PPT 5			11-May	G	11-Aug	J		
W 122	PPT 5			12-May	H	12-Aug	M		
W 411	PPT 5			11-May	G	12-Aug	M		
W 24	PPT 75			4-May	C	11-Aug	J		
W 33R	PPT 75			4-May	C	11-Aug	J		
W 133	PPT 5			11-May	G	12-Aug	M		
W 410	PPT 75			4-May	C	11-Aug	J		
W 412	PPT 5			11-May	G	12-Aug	M		
W 409	PPB			12-May	H	18-Aug	L		
Drift-Platteville Aquifer Pumping Wells									
W 420	PPB	12-Mar	A	5-May	D	10-Aug	I	10-Nov	N
W 421	PPB	Well not available for sampling		7-May	F	13-Aug	K	10-Nov	N
W 434	PPB			8-May	F	Well not available for sampling			
W 439	PPB			5-May	D	10-Aug	I		
Platteville Aquifer									
W20	PPB			12-May	H	18-Aug	L		
W131	PPB			8-May	F	13-Aug	K		
W428	PPB			7-May	F	13-Aug	K		
W431	PPB			7-May	F	13-Aug	K		
W 101	PPB			12-May	H	18-Aug	L		
W433	PPB			12-May	H	18-Aug	L		
W27	PPB			8-May	F	18-Aug	L		
W120	PPB			8-May	F	13-Aug	K		
W143	PPB			12-May	H	18-Aug	L		
W437	PPB			8-May	F	18-Aug	L		
W438	PPB			12-May	H	18-Aug	L		
W426	PPB			8-May	F	13-Aug	K		
Drift Aquifer									
P109	PPB			5-May	D	10-Aug	I		
P112	PPB			5-May	D	10-Aug	I		
P307	PPB			5-May	D	10-Aug	I		
P308	PPB			5-May	D	10-Aug	I		
P309	PPB			5-May	D	10-Aug	I		
P310	PPB			5-May	D	10-Aug	I		
P312	PPB			8-May	F	13-Aug	K		
W117	PPB			5-May	D	10-Aug	I		
W128	PPB			7-May	F	13-Aug	K		
W136	PPB			8-May	F	13-Aug	K		
W422	PPB			7-May	F	13-Aug	K		
W427	PPB			5-May	D	10-Aug	I		

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9C130273

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell (formerly Antonczak)
Project Manager

April 2, 2009

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9C270231

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell (formerly Antonczak)
Project Manager

April 21, 2009

CASE NARRATIVE
D9C270231

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Four samples plus one set of MS/MSD were received under chain of custody on March 27, 2009. The samples were received at temperatures of 3.1°C, 3.6°C and 3.7°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

During the original extraction of samples W105-032609, W105MS-032609, W105MSD-032609, W105D-032609, W105FB-032609 and W105FBD-032609 in QC batch 9088012, the batch Method Blank burned up. The client was notified of this anomaly on March 31, 2009. As each sample was submitted with 6x1L Amber bottles, and the extraction process requires a 4-Liter prep, the following remaining sample containers were used for re-extraction in QC batch 9090409:

Sample W105-032609 re-extracted using two remaining 1L Ambers from W105 and W105MS.
Sample W105D-032609 re-extracted using two remaining 1L Ambers from W105D and W105MSD.
Sample W105FB-032609 re-extracted using two remaining 1L Ambers from W105FB and W105FBD.

Per the client's instructions, sample W105FBD-032609 is reported under batch 9088012, as there was insufficient volume to re-extract this sample in batch 9090409. Additionally, sample W105-032609 is reported under both batches as the associated MS/MSD is reported under batch 9088012.

Samples W105-032609 and W105D-032609 were analyzed at two different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analyses performed at a 4x dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

Surrogate Chrysene-d12 was recovered slightly below the lower control limit in sample W105-032609 at 26% (limits 28-101%). Upon re-extraction and reanalysis, surrogate recoveries were 100% in control. Both the original and reanalysis data have been provided, as the client requested sample specific MS/MSD is associated with the original analysis of the sample in batch 9088012.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

Please note that compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene could not be resolved in samples W105-032609 and W105D-032609; therefore, the combined peak reported as Benzo(b)fluoranthene is most likely a combination of the two compounds. Associated results in the analytical report have been flagged with a "K".

Please note the method required Method Blank could not be performed for QC batch 9088012, as the batch method blank burned up during the extraction process. The client was notified on March 31, 2009.

The LCS associated with QC batch 9088012 exhibited a percent recovery below the lower control limits for Acridine at 15% (limits 30-150%). The LCS was reanalyzed with similar results. The laboratory noted that Acridine is a new compound for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

The LCS associated with QC batch 9090409 exhibited recoveries below the lower control limits for Acridine, Dibenz(a,j)acridine and Quinoline. Analyte Dibenzo(a,j)acridine, recovered at 21% (limits 30-150%), is not a compound of interest for this project; therefore, corrective action was deemed unnecessary. Acridine was recovered at 6% (limits 30-150%) and Quinoline was recovered at 25% (limits 30-150%). The LCS was reanalyzed with similar results. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits. Re-extraction was not possible due to all sample volume being consumed in the two previous extractions.

The MS/MSD associated with QC batch 9088012 was performed using sample W105-032609, as requested. MS/MSD exhibited 17 of the 44 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 29 of the 44 Matrix Spike Duplicate compound recoveries and one of the three surrogate recoveries outside the control limits. The MS/MSD exhibited 5 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports. The laboratory noted that matrix interference was obvious upon evaluation of the chromatograms, as there was a significant baseline rise affecting the recovery of these compounds.

Acenaphthtene	Acenaphthylene	Benzo(a)anthracene
Benzo(b)fluoranthene	Benzo(k)fluoranthene	7H-Dibenzo[c,g]carbazole
Dibenz(a,h)acridine	Dibenz(a,j)acridine	Benzo(ghi)perylene
Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene	Dibenzo(a,h)pyrene
Dibenzo(a,l),pyrene	Benzo(a)pyrene	2,6-Dimethylnaphthalene
Benzo(e)pyrene	3-Methylcholanthrene	6-Methylchrysene
Carbazole	Chrysene	Dibenzo(a,h)anthracene
Dibenzofuran	2,3-Dihydroindene	Fluoranthene
Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene
Perylene	Pyrene	Chrysene-d12

The method required MS/MSD could not be performed for QC re-extraction batch 9090409, due to insufficient sample volume. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines.

No other anomalies were noted.

Data Completeness for Method 8270C SIM (batch 908812)

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9C270231
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	14	13
LCS Surrogates	6	6
FB/FBD	62	61
MS	7	6
MS Surrogates	3	3
MSD	7	7
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	15	14
Samples and QC Internal Standard Area	30	30
TOTAL	**219**	**210**
% Completeness	**95.9%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9C270231					
Sample: W105-032609		**DUP: W105D-032609**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	730	Acenaphthene	750	2.7	
Acenaphthylene	200	Acenaphthylene	210	4.9	
Acridine	ND	Acridine	ND	0.0	
Anthracene	7.0	Anthracene	11	44.4	
Benzo(a)anthracene	36	Benzo(a)anthracene	47	26.5	
Benzo(b)fluoranthene	26	Benzo(b)fluoranthene	32	20.7	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	23	2,3-Benzofuran	24	4.3	
Benzo(ghi)perylene	5.2	Benzo(ghi)perylene	6.8	26.7	
Benzo(a)pyrene	12	Benzo(a)pyrene	21	54.5	p
Benzo(e)pyrene	11	Benzo(e)pyrene	14	24.0	
Benzo(b)thiophene	95	Benzo(b)thiophene	120	23.3	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	370	Carbazole	440	17.3	
Chrysene	34	Chrysene	37	8.5	
Dibenz(a,h)anthracene	1.1	Dibenz(a,h)anthracene	1.6	37.0	
Dibenzofuran	230	Dibenzofuran	230	0.0	
Dibenzothiophene	47	Dibenzothiophene	56	17.5	
2,3-Dihydroindene	310	2,3-Dihydroindene	300	3.3	
Fluoranthene	400	Fluoranthene	440	9.5	
Fluorene	290	Fluorene	310	6.7	
Indene	31	Indene	30	3.3	
Indeno(1,2,3-cd)pyrene	4.0	Indeno(1,2,3-cd)pyrene	5.5	31.6	
Indole	10	Indole	10	0.0	
2-Methylnaphthalene	2.0	2-Methylnaphthalene	2.2	9.5	
1-Methylnaphthalene	160	1-Methylnaphthalene	150	6.5	
Naphthalene	2.2	Naphthalene	2.3	4.4	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	50	Phenanthrene	55	9.5	
Pyrene	310	Pyrene	350	12.1	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9C270231

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W105-032609 03/26/09 12:55 001				
Acenaphthene	850	23	ng/L	SW846 8270C SIM
Acenaphthene	730	23	ng/L	SW846 8270C SIM
Acenaphthylene	300	4.8	ng/L	SW846 8270C SIM
Acenaphthylene	200	4.8	ng/L	SW846 8270C SIM
Acridine	41	6.5	ng/L	SW846 8270C SIM
Anthracene	88	4.2	ng/L	SW846 8270C SIM
Anthracene	7.0	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	16	4.3	ng/L	SW846 8270C SIM
Benzo(a)anthracene	36	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	14 K	4.7	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	26 K	4.7	ng/L	SW846 8270C SIM
2,3-Benzofuran	37	5.4	ng/L	SW846 8270C SIM
2,3-Benzofuran	23	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	4.7 J	6.2	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	5.2 J	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	8.2	2.5	ng/L	SW846 8270C SIM
Benzo(a)pyrene	12	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	5.7	4.3	ng/L	SW846 8270C SIM
Benzo(e)pyrene	11	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	99	5.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	95	5.2	ng/L	SW846 8270C SIM
Biphenyl	3.0 J	5.6	ng/L	SW846 8270C SIM
Carbazole	390	15	ng/L	SW846 8270C SIM
Carbazole	370	15	ng/L	SW846 8270C SIM
Chrysene	18	5.6	ng/L	SW846 8270C SIM
Chrysene	34	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	1.1 J	5.9	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	1.1 J	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	230	5.7	ng/L	SW846 8270C SIM
Dibenzofuran	310	23	ng/L	SW846 8270C SIM
Dibenzothiophene	23	4.1	ng/L	SW846 8270C SIM
Dibenzothiophene	47	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	310	5.0	ng/L	SW846 8270C SIM
2,3-Dihydroindene	460	20	ng/L	SW846 8270C SIM
Fluoranthene	350	18	ng/L	SW846 8270C SIM
Fluoranthene	400	18	ng/L	SW846 8270C SIM
Fluorene	290	4.1	ng/L	SW846 8270C SIM
Fluorene	430	16	ng/L	SW846 8270C SIM
Indene	55	4.7	ng/L	SW846 8270C SIM
Indene	31	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	3.9 J	5.4	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	4.0 J	5.4	ng/L	SW846 8270C SIM
Indole	15	4.7	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9C270231

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W105-032609 03/26/09 12:55 001				
Indole	10	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	6.7	5.9	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.0 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	160	5.6	ng/L	SW846 8270C SIM
1-Methylnaphthalene	380	22	ng/L	SW846 8270C SIM
Naphthalene	2.2 J	8.6	ng/L	SW846 8270C SIM
Phenanthrene	5.8 J	6.3	ng/L	SW846 8270C SIM
Phenanthrene	50	6.3	ng/L	SW846 8270C SIM
Pyrene	310	4.2	ng/L	SW846 8270C SIM
Pyrene	310	17	ng/L	SW846 8270C SIM
Quinoline	15	9.0	ng/L	SW846 8270C SIM
W105D-032609 03/26/09 13:00 002				
Acenaphthene	750	23	ng/L	SW846 8270C SIM
Acenaphthylene	210	4.8	ng/L	SW846 8270C SIM
Anthracene	11	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	47	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	32 K	4.7	ng/L	SW846 8270C SIM
2,3-Benzofuran	24	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	6.8	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	21	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	14	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	120	5.2	ng/L	SW846 8270C SIM
Carbazole	440	15	ng/L	SW846 8270C SIM
Chrysene	37	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	1.6 J	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	230	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	56	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	300	5.0	ng/L	SW846 8270C SIM
Fluoranthene	440	18	ng/L	SW846 8270C SIM
Fluorene	310	4.1	ng/L	SW846 8270C SIM
Indene	30	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	5.5	5.4	ng/L	SW846 8270C SIM
Indole	10	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.2 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	150	5.6	ng/L	SW846 8270C SIM
Naphthalene	2.3 J	8.6	ng/L	SW846 8270C SIM
Phenanthrene	55	6.3	ng/L	SW846 8270C SIM
Pyrene	350	17	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9C270231

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W105FB-032609 03/26/09 12:45 003				
Naphthalene	1.2 J	8.6	ng/L	SW846 8270C SIM
W105FBD-032609 03/26/09 12:50 004				
Benzo(ghi)perylene	1.6 J	6.2	ng/L	SW846 8270C SIM
Fluoranthene	1.7 J	4.6	ng/L	SW846 8270C SIM
Naphthalene	1.3 J	8.6	ng/L	SW846 8270C SIM
Pyrene	4.2	4.2	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9C270231

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9C270231

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C SIM	Rhain Carpenter	000130

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9C270231

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K881M	001	W105-032609	03/26/09	12:55
K881N	002	W105D-032609	03/26/09	13:00
K881Q	003	W105FB-032609	03/26/09	12:45
K881R	004	W105FBD-032609	03/26/09	12:50

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W105-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-001	**Work Order #...:** K881M1AA	**Matrix.....:** WG	
Date Sampled...: 03/26/09	**Date Received..:** 03/27/09		
Prep Date.....: 03/29/09	**Analysis Date..:** 04/03/09		
Prep Batch #...: 9088012	**Analysis Time..:** 22:11		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	**300**	**4.8**	**ng/L**
Acridine	**41**	**6.5**	**ng/L**
Anthracene	**88**	**4.2**	**ng/L**
Benzo(a)anthracene	**16**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**14 K**	**4.7**	**ng/L**
Benzo(k)fluoranthene	ND K	4.1	ng/L
2,3-Benzofuran	**37**	**5.4**	**ng/L**
Benzo(ghi)perylene	**4.7 J**	**6.2**	**ng/L**
Benzo(a)pyrene	**8.2**	**2.5**	**ng/L**
Benzo(e)pyrene	**5.7**	**4.3**	**ng/L**
Benzo(b)thiophene	**99**	**5.2**	**ng/L**
Biphenyl	**3.0 J**	**5.6**	**ng/L**
Chrysene	**18**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	**1.1 J**	**5.9**	**ng/L**
Dibenzothiophene	**23**	**4.1**	**ng/L**
Indene	**55**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	**3.9 J**	**5.4**	**ng/L**
Indole	**15**	**4.7**	**ng/L**
2-Methylnaphthalene	**6.7**	**5.9**	**ng/L**
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	**5.8 J**	**6.3**	**ng/L**
Pyrene	**310**	**4.2**	**ng/L**
Quinoline	**15**	**9.0**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	26 *	(28 - 101)
Fluorene d-10	67	(23 - 84)
Naphthalene-d8	56	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

K Benzo(b&k)fluoranthene unresolved-matrix.Total reported as Benzo(b)fluoranthene.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W105-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-001	**Work Order #...:** K881M3AA	**Matrix.....:** WG	
Date Sampled...: 03/26/09	**Date Received..:** 03/27/09		
Prep Date.....: 03/29/09	**Analysis Date..:** 04/06/09		
Prep Batch #...: 9088012	**Analysis Time..:** 12:01		
Dilution Factor: 4			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**850**	**23**	**ng/L**
Carbazole	**390**	**15**	**ng/L**
Dibenzofuran	**310**	**23**	**ng/L**
2,3-Dihydroindene	**460**	**20**	**ng/L**
Fluoranthene	**350**	**18**	**ng/L**
Fluorene	**430**	**16**	**ng/L**
1-Methylnaphthalene	**380**	**22**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W105-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-001 Work Order #...: K881M2AA Matrix.....: WG
Date Sampled...: 03/26/09 Date Received..: 03/27/09
Prep Date.....: 03/31/09 Analysis Date..: 04/03/09
Prep Batch #...: 9090409 Analysis Time..: 19:55
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	**200**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**7.0**	**4.2**	**ng/L**
Benzo(a)anthracene	**36**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**26 K**	**4.7**	**ng/L**
Benzo(k)fluoranthene	ND K	4.1	ng/L
2,3-Benzofuran	**23**	**5.4**	**ng/L**
Benzo(ghi)perylene	**5.2 J**	**6.2**	**ng/L**
Benzo(a)pyrene	**12**	**2.5**	**ng/L**
Benzo(e)pyrene	**11**	**4.3**	**ng/L**
Benzo(b)thiophene	**95**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Chrysene	**34**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	**1.1 J**	**5.9**	**ng/L**
Dibenzofuran	**230**	**5.7**	**ng/L**
Dibenzothiophene	**47**	**4.1**	**ng/L**
2,3-Dihydroindene	**310**	**5.0**	**ng/L**
Fluorene	**290**	**4.1**	**ng/L**
Indene	**31**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	**4.0 J**	**5.4**	**ng/L**
Indole	**10**	**4.7**	**ng/L**
2-Methylnaphthalene	**2.0 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**160**	**5.6**	**ng/L**
Naphthalene	**2.2 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**50**	**6.3**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	67	(28 - 101)
Fluorene d-10	61	(23 - 84)
Naphthalene-d8	51	(22 - 97)

NOTE(S):

K Benzo(b&k)fluoranthene unresolved-matrix.Total reported as Benzo(b)fluoranthene.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W105-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-001 **Work Order #...:** K881M4AA **Matrix.....:** WG
Date Sampled...: 03/26/09 **Date Received..:** 03/27/09
Prep Date.....: 03/31/09 **Analysis Date..:** 04/06/09
Prep Batch #...: 9090409 **Analysis Time..:** 13:41
Dilution Factor: 4

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**730**	**23**	**ng/L**
Carbazole	**370**	**15**	**ng/L**
Fluoranthene	**400**	**18**	**ng/L**
Pyrene	**310**	**17**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W105D-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-002	**Work Order #...:** K881N2AA	**Matrix.....:** WG	
Date Sampled...: 03/26/09	**Date Received..:** 03/27/09		
Prep Date.....: 03/31/09	**Analysis Date..:** 04/03/09		
Prep Batch #...: 9090409	**Analysis Time..:** 20:29		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	**210**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**11**	**4.2**	**ng/L**
Benzo(a)anthracene	**47**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**32 K**	**4.7**	**ng/L**
Benzo(k)fluoranthene	ND K	4.1	ng/L
2,3-Benzofuran	**24**	**5.4**	**ng/L**
Benzo(ghi)perylene	**6.8**	**6.2**	**ng/L**
Benzo(a)pyrene	**21**	**2.5**	**ng/L**
Benzo(e)pyrene	**14**	**4.3**	**ng/L**
Benzo(b)thiophene	**120**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Chrysene	**37**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	**1.6 J**	**5.9**	**ng/L**
Dibenzofuran	**230**	**5.7**	**ng/L**
Dibenzothiophene	**56**	**4.1**	**ng/L**
2,3-Dihydroindene	**300**	**5.0**	**ng/L**
Fluorene	**310**	**4.1**	**ng/L**
Indene	**30**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	**5.5**	**5.4**	**ng/L**
Indole	**10**	**4.7**	**ng/L**
2-Methylnaphthalene	**2.2 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**150**	**5.6**	**ng/L**
Naphthalene	**2.3 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**55**	**6.3**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(28 - 101)
Fluorene d-10	66	(23 - 84)
Naphthalene-d8	54	(22 - 97)

NOTE(S):

K Benzo(b&k)fluoranthene unresolved-matrix.Total reported as Benzo(b)fluoranthene.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W105D-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-002	**Work Order #...:** K881N4AA	**Matrix.....:** WG	
Date Sampled...: 03/26/09	**Date Received..:** 03/27/09		
Prep Date.....: 03/31/09	**Analysis Date..:** 04/06/09		
Prep Batch #...: 9090409	**Analysis Time..:** 14:15		
Dilution Factor: 4			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**750**	**23**	**ng/L**
Carbazole	**440**	**15**	**ng/L**
Fluoranthene	**440**	**18**	**ng/L**
Pyrene	**350**	**17**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W105FB-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-003 **Work Order #...:** K881Q2AA **Matrix.....:** WQ
Date Sampled...: 03/26/09 **Date Received..:** 03/27/09
Prep Date.....: 03/31/09 **Analysis Date..:** 04/03/09
Prep Batch #...: 9090409 **Analysis Time..:** 21:03
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.2 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	66	(28 - 101)
Fluorene d-10	72	(23 - 84)
Naphthalene-d8	53	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W105FBD-032609

GC/MS Semivolatiles

Lot-Sample #...: D9C270231-004 **Work Order #...:** K881R1AA **Matrix.....:** WQ
Date Sampled...: 03/26/09 **Date Received..:** 03/27/09
Prep Date.....: 03/29/09 **Analysis Date..:** 04/06/09
Prep Batch #...: 9088012 **Analysis Time..:** 13:08
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	**1.6 J**	**6.2**	**ng/L**
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	**1.7 J**	**4.6**	**ng/L**
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.3 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**4.2**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	66	(28 - 101)
Fluorene d-10	61	(23 - 84)
Naphthalene-d8	50	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9C270231

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9088012	9088002
	WG	SW846 8270C SIM		9090409	
002	WG	SW846 8270C SIM		9090409	
003	WQ	SW846 8270C SIM		9090409	
004	WQ	SW846 8270C SIM		9088012	9088002

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K9DMR1AA **Matrix.....:** WATER
MB Lot-Sample #: D9C310000-409

Prep Date.....: 03/31/09 **Analysis Time..:** 15:54
Analysis Date..: 04/03/09 **Prep Batch #...:** 9090409
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	43	(28 - 101)
Fluorene d-10	55	(23 - 84)
Naphthalene-d8	43	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 Work Order #...: K898H1AC Matrix.....: WATER
LCS Lot-Sample#: D9C290000-012
Prep Date.....: 03/29/09 Analysis Date..: 04/03/09
Prep Batch #...: 9088012 Analysis Time..: 18:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	69	(30 - 150)	SW846 8270C SIM
Acenaphthylene	60	(30 - 150)	SW846 8270C SIM
Acridine	15 a	(30 - 150)	SW846 8270C SIM
Anthracene	58	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	48	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	58	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	91	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	82	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	60	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	42	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	64	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	83	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	82	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	71	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	61	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	80	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	69	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	63	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	57	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	72	(30 - 150)	SW846 8270C SIM
Benzo(b)thiophene	61	(30 - 150)	SW846 8270C SIM
3-Methylcholanthrene	59	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	68	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	59	(30 - 150)	SW846 8270C SIM
Biphenyl	59	(30 - 150)	SW846 8270C SIM
Carbazole	51	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	64	(30 - 150)	SW846 8270C SIM
Chrysene	93	(30 - 132)	SW846 8270C SIM
Dibenzo(a,h)anthracene	84	(30 - 150)	SW846 8270C SIM
Dibenzofuran	64	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	62	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	64	(30 - 150)	SW846 8270C SIM
Fluoranthene	51	(30 - 150)	SW846 8270C SIM

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K898H1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C290000-012

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**71**	**(30 - 132)**	**SW846 8270C SIM**
Indene	**61**	**(30 - 150)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**85**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**60**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**60**	**(30 - 150)**	**SW846 8270C SIM**
1-Methylnaphthalene	**59**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**67**	**(30 - 150)**	**SW846 8270C SIM**
Perylene	**75**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**63**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**51**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**42**	**(30 - 150)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(28 - 101)
Fluorene d-10	63	(23 - 84)
Naphthalene-d8	54	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K898H1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C290000-012
Prep Date.....: 03/29/09 **Analysis Date..:** 04/03/09
Prep Batch #...: 9088012 **Analysis Time..:** 18:14
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	51.7	ng/L	69	SW846 8270C S
Acenaphthylene	75.0	44.8	ng/L	60	SW846 8270C S
Acridine	75.0	11.3 a	ng/L	15	SW846 8270C S
Anthracene	75.0	43.3	ng/L	58	SW846 8270C S
Benzo(a)anthracene	75.0	35.8	ng/L	48	SW846 8270C S
Benzo(b)fluoranthene	75.0	43.5	ng/L	58	SW846 8270C S
Benzo(k)fluoranthene	75.0	68.0	ng/L	91	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	61.6	ng/L	82	SW846 8270C S
Dibenz(a,h)acridine	75.0	45.3	ng/L	60	SW846 8270C S
Dibenz(a,j)acridine	75.0	31.1	ng/L	42	SW846 8270C S
2,3-Benzofuran	75.0	48.0	ng/L	64	SW846 8270C S
Benzo(ghi)perylene	75.0	62.5	ng/L	83	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	61.6	ng/L	82	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	53.5	ng/L	71	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	45.7	ng/L	61	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	59.9	ng/L	80	SW846 8270C S
Benzo(a)pyrene	75.0	51.9	ng/L	69	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	47.3	ng/L	63	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	42.5	ng/L	57	SW846 8270C S
Benzo(e)pyrene	75.0	54.0	ng/L	72	SW846 8270C S
Benzo(b)thiophene	75.0	45.6	ng/L	61	SW846 8270C S
3-Methylcholanthrene	75.0	44.3	ng/L	59	SW846 8270C S
6-Methylchrysene	75.0	51.3	ng/L	68	SW846 8270C S
1-Methylphenanthrene	75.0	44.6	ng/L	59	SW846 8270C S
Biphenyl	75.0	44.1	ng/L	59	SW846 8270C S
Carbazole	75.0	38.0	ng/L	51	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	48.0	ng/L	64	SW846 8270C S
Chrysene	75.0	70.0	ng/L	93	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	63.1	ng/L	84	SW846 8270C S
Dibenzofuran	75.0	47.8	ng/L	64	SW846 8270C S
Dibenzothiophene	75.0	46.8	ng/L	62	SW846 8270C S
2,3-Dihydroindene	75.0	47.8	ng/L	64	SW846 8270C S
Fluoranthene	75.0	38.0	ng/L	51	SW846 8270C S

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K898H1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C290000-012

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**75.0**	**53.5**	**ng/L**	**71**	**SW846 8270C S**
Indene	**75.0**	**45.5**	**ng/L**	**61**	**SW846 8270C S**
Indeno(1,2,3-cd)pyrene	**75.0**	**63.9**	**ng/L**	**85**	**SW846 8270C S**
Indole	**75.0**	**45.3**	**ng/L**	**60**	**SW846 8270C S**
2-Methylnaphthalene	**75.0**	**45.0**	**ng/L**	**60**	**SW846 8270C S**
1-Methylnaphthalene	**75.0**	**43.9**	**ng/L**	**59**	**SW846 8270C S**
Naphthalene	**75.0**	**50.3**	**ng/L**	**67**	**SW846 8270C S**
Perylene	**75.0**	**56.6**	**ng/L**	**75**	**SW846 8270C S**
Phenanthrene	**75.0**	**47.1**	**ng/L**	**63**	**SW846 8270C S**
Pyrene	**75.0**	**37.9**	**ng/L**	**51**	**SW846 8270C S**
Quinoline	**75.0**	**31.2**	**ng/L**	**42**	**SW846 8270C S**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(28 - 101)
Fluorene d-10	63	(23 - 84)
Naphthalene-d8	54	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 Work Order #...: K9DMR1AC Matrix.....: WATER
LCS Lot-Sample#: D9C310000-409
Prep Date.....: 03/31/09 Analysis Date..: 04/03/09
Prep Batch #...: 9090409 Analysis Time..: 16:28
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	58	(30 - 150)	SW846 8270C SIM
Acenaphthylene	47	(30 - 150)	SW846 8270C SIM
Acridine	0.0 a	(30 - 150)	SW846 8270C SIM
Anthracene	60	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	41	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	57	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	69	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	69	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	46	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	21 a	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	52	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	64	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	62	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	51	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	43	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	61	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	59	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	54	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	48	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	61	(30 - 150)	SW846 8270C SIM
Benzo(b)thiophene	50	(30 - 150)	SW846 8270C SIM
3-Methylcholanthrene	50	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	61	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	52	(30 - 150)	SW846 8270C SIM
Biphenyl	51	(30 - 150)	SW846 8270C SIM
Carbazole	43	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	56	(30 - 150)	SW846 8270C SIM
Chrysene	81	(30 - 132)	SW846 8270C SIM
Dibenzo(a,h)anthracene	63	(30 - 150)	SW846 8270C SIM
Dibenzofuran	55	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	54	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	52	(30 - 150)	SW846 8270C SIM
Fluoranthene	45	(30 - 150)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K9DMR1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C310000-409

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**63**	**(30 - 132)**	**SW846 8270C SIM**
Indene	**49**	**(30 - 150)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**65**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**48**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**50**	**(30 - 150)**	**SW846 8270C SIM**
1-Methylnaphthalene	**50**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**55**	**(30 - 150)**	**SW846 8270C SIM**
Perylene	**61**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**54**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**46**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**25 a**	**(30 - 150)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	63	(28 - 101)
Fluorene d-10	56	(23 - 84)
Naphthalene-d8	44	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K9DMR1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C310000-409
Prep Date.....: 03/31/09 **Analysis Date..:** 04/03/09
Prep Batch #...: 9090409 **Analysis Time..:** 16:28
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	43.4	ng/L	58	SW846 8270C S
Acenaphthylene	75.0	35.3	ng/L	47	SW846 8270C S
Acridine	75.0	0.0 a	ng/L	0.0	SW846 8270C S
Anthracene	75.0	45.2	ng/L	60	SW846 8270C S
Benzo(a)anthracene	75.0	31.0	ng/L	41	SW846 8270C S
Benzo(b)fluoranthene	75.0	42.4	ng/L	57	SW846 8270C S
Benzo(k)fluoranthene	75.0	52.0	ng/L	69	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	51.8	ng/L	69	SW846 8270C S
Dibenz(a,h)acridine	75.0	34.4	ng/L	46	SW846 8270C S
Dibenz(a,j)acridine	75.0	15.7 a	ng/L	21	SW846 8270C S
2,3-Benzofuran	75.0	38.8	ng/L	52	SW846 8270C S
Benzo(ghi)perylene	75.0	47.6	ng/L	64	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	46.7	ng/L	62	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	37.9	ng/L	51	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	32.6	ng/L	43	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	46.0	ng/L	61	SW846 8270C S
Benzo(a)pyrene	75.0	43.9	ng/L	59	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	40.2	ng/L	54	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	35.6	ng/L	48	SW846 8270C S
Benzo(e)pyrene	75.0	45.5	ng/L	61	SW846 8270C S
Benzo(b)thiophene	75.0	37.2	ng/L	50	SW846 8270C S
3-Methylcholanthrene	75.0	37.2	ng/L	50	SW846 8270C S
6-Methylchrysene	75.0	46.0	ng/L	61	SW846 8270C S
1-Methylphenanthrene	75.0	38.7	ng/L	52	SW846 8270C S
Biphenyl	75.0	38.2	ng/L	51	SW846 8270C S
Carbazole	75.0	32.4	ng/L	43	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	41.9	ng/L	56	SW846 8270C S
Chrysene	75.0	60.5	ng/L	81	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	47.6	ng/L	63	SW846 8270C S
Dibenzofuran	75.0	41.6	ng/L	55	SW846 8270C S
Dibenzothiophene	75.0	40.4	ng/L	54	SW846 8270C S
2,3-Dihydroindene	75.0	38.6	ng/L	52	SW846 8270C S
Fluoranthene	75.0	33.8	ng/L	45	SW846 8270C S

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K9DMR1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C310000-409

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**75.0**	**47.4**	**ng/L**	**63**	**SW846 8270C S**
Indene	**75.0**	**37.0**	**ng/L**	**49**	**SW846 8270C S**
Indeno(1,2,3-cd)pyrene	**75.0**	**49.1**	**ng/L**	**65**	**SW846 8270C S**
Indole	**75.0**	**35.8**	**ng/L**	**48**	**SW846 8270C S**
2-Methylnaphthalene	**75.0**	**37.2**	**ng/L**	**50**	**SW846 8270C S**
1-Methylnaphthalene	**75.0**	**37.7**	**ng/L**	**50**	**SW846 8270C S**
Naphthalene	**75.0**	**41.1**	**ng/L**	**55**	**SW846 8270C S**
Perylene	**75.0**	**45.8**	**ng/L**	**61**	**SW846 8270C S**
Phenanthrene	**75.0**	**40.7**	**ng/L**	**54**	**SW846 8270C S**
Pyrene	**75.0**	**34.8**	**ng/L**	**46**	**SW846 8270C S**
Quinoline	**75.0**	**18.7 a**	**ng/L**	**25**	**SW846 8270C S**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	63	(28 - 101)
Fluorene d-10	56	(23 - 84)
Naphthalene-d8	44	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 Work Order #...: K881M1AC-MS Matrix.....: WG
MS Lot-Sample #: D9C270231-001 K881M1AD-MSD
Date Sampled...: 03/26/09 Date Received..: 03/27/09
Prep Date.....: 03/29/09 Analysis Date..: 04/03/09
Prep Batch #...: 9088012 Analysis Time..: 22:44
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	50	(30 - 150)			SW846 8270C SIM
	0.0 a	(30 - 150)	0.0	(0-50)	SW846 8270C SIM
Acenaphthylene	76	(30 - 150)			SW846 8270C SIM
	25 a	(30 - 150)	13	(0-50)	SW846 8270C SIM
Acridine	67	(30 - 150)			SW846 8270C SIM
	50	(30 - 150)	20	(0-50)	SW846 8270C SIM
Anthracene	89	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	21	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	45	(30 - 150)			SW846 8270C SIM
	21 a	(30 - 150)	48	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	3.4 a	(30 - 150)			SW846 8270C SIM
	0.0 a	(30 - 150)	0.0	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	22 a	(30 - 150)			SW846 8270C SIM
	15 a	(30 - 150)	47	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	18 a	(30 - 150)			SW846 8270C SIM
	11 a,p	(30 - 150)	60	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	11 a	(30 - 150)			SW846 8270C SIM
	6.9 a,p	(30 - 150)	54	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	13 a	(30 - 150)			SW846 8270C SIM
	8.0 a,p	(30 - 150)	52	(0-50)	SW846 8270C SIM
2,3-Benzofuran	57	(30 - 150)			SW846 8270C SIM
	49	(30 - 150)	12	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	4.9 a	(30 - 150)			SW846 8270C SIM
	1.6 a	(30 - 150)	38	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	6.8 a	(30 - 150)			SW846 8270C SIM
	5.6 a	(30 - 150)	28	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	6.2 a	(30 - 150)			SW846 8270C SIM
	5.1 a	(30 - 150)	28	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	5.2 a	(30 - 150)			SW846 8270C SIM
	4.5 a	(30 - 150)	23	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	21 a	(30 - 150)			SW846 8270C SIM
	15 a	(30 - 150)	43	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	15 a	(30 - 150)			SW846 8270C SIM
	5.9 a	(30 - 150)	46	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	50	(30 - 150)			SW846 8270C SIM
	39	(30 - 150)	33	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	60	(30 - 150)			SW846 8270C SIM
	14 a	(30 - 150)	12	(0-50)	SW846 8270C SIM

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K881M1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C270231-001 K881M1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	11 a	(30 - 150)			SW846 8270C SIM
	4.7 a	(30 - 150)	47	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	68	(30 - 150)			SW846 8270C SIM
	41	(30 - 150)	18	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	15 a	(30 - 150)			SW846 8270C SIM
	9.2 a,p	(30 - 150)	53	(0-50)	SW846 8270C SIM
6-Methylchrysene	26 a	(30 - 150)			SW846 8270C SIM
	15 a,p	(30 - 150)	64	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	92	(30 - 150)			SW846 8270C SIM
	70	(30 - 150)	21	(0-50)	SW846 8270C SIM
Biphenyl	66	(30 - 150)			SW846 8270C SIM
	60	(30 - 150)	17	(0-50)	SW846 8270C SIM
Carbazole	101	(30 - 150)			SW846 8270C SIM
	0.0 a	(30 - 150)	0.0	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	71	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	18	(0-50)	SW846 8270C SIM
Chrysene	42	(30 - 132)			SW846 8270C SIM
	21 a	(30 - 132)	44	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	7.1 a	(30 - 150)			SW846 8270C SIM
	4.4 a	(30 - 150)	45	(0-50)	SW846 8270C SIM
Dibenzofuran	66	(30 - 150)			SW846 8270C SIM
	6.6 a	(30 - 150)	14	(0-50)	SW846 8270C SIM
Dibenzothiophene	72	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	32	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	36	(30 - 150)			SW846 8270C SIM
	0.0 a	(30 - 150)	0.0	(0-50)	SW846 8270C SIM
Fluoranthene	118	(30 - 150)			SW846 8270C SIM
	3.7 a	(30 - 150)	21	(0-50)	SW846 8270C SIM
Fluorene	77	(30 - 132)			SW846 8270C SIM
	0.0 a	(30 - 132)	0.0	(0-50)	SW846 8270C SIM
Indene	58	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	16	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	6.1 a	(30 - 150)			SW846 8270C SIM
	3.1 a	(30 - 150)	36	(0-50)	SW846 8270C SIM
Indole	70	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	23	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	65	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	18	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	61	(30 - 150)			SW846 8270C SIM
	0.0 a	(30 - 150)	0.0	(0-50)	SW846 8270C SIM
Naphthalene	68	(30 - 150)			SW846 8270C SIM
	60	(30 - 150)	20	(0-50)	SW846 8270C SIM

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K881M1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C270231-001 K881M1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**16 a**	**(30 - 150)**			**SW846 8270C SIM**
	10 a	**(30 - 150)**	**50**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**71**	**(30 - 150)**			**SW846 8270C SIM**
	60	**(30 - 150)**	**22**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**109**	**(30 - 150)**			**SW846 8270C SIM**
	15 a	**(30 - 150)**	**22**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**50**	**(30 - 150)**			**SW846 8270C SIM**
	39	**(30 - 150)**	**22**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	35	(28 - 101)
	22 *	(28 - 101)
Fluorene d-10	67	(23 - 84)
	58	(23 - 84)
Naphthalene-d8	56	(22 - 97)
	52	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K881M1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C270231-001 K881M1AD-MSD
Date Sampled...: 03/26/09 **Date Received..:** 03/27/09
Prep Date.....: 03/29/09 **Analysis Date..:** 04/03/09
Prep Batch #...: 9088012 **Analysis Time..:** 22:44
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	870	82.6	913	ng/L	50		SW846 8270C SIM
	870	76.2	815	ng/L	0.0 a	0.0	SW846 8270C SIM
Acenaphthylene	300	82.6	361	ng/L	76		SW846 8270C SIM
	300	76.2	318	ng/L	25 a	13	SW846 8270C SIM
Acridine	41	82.6	96.3	ng/L	67		SW846 8270C SIM
	41	76.2	79.0	ng/L	50	20	SW846 8270C SIM
Anthracene	88	82.6	162	ng/L	89		SW846 8270C SIM
	88	76.2	131	ng/L	56	21	SW846 8270C SIM
Benzo(a)anthracene	16	82.6	53.3	ng/L	45		SW846 8270C SIM
	16	76.2	32.8	ng/L	21 a	48	SW846 8270C SIM
Benzo(b)fluoranthene	14	82.6	16.9	ng/L	3.4 a		SW846 8270C SIM
	14	76.2	10.8	ng/L	0.0 a	0.0	SW846 8270C SIM
Benzo(k)fluoranthene	ND	82.6	18.4	ng/L	22 a		SW846 8270C SIM
	ND	76.2	11.3	ng/L	15 a	47	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	ND	82.6	15.1	ng/L	18 a		SW846 8270C SIM
	ND	76.2	8.10	ng/L	11 a,p	60	SW846 8270C SIM
Dibenz(a,h)acridine	ND	82.6	9.16	ng/L	11 a		SW846 8270C SIM
	ND	76.2	5.25	ng/L	6.9	54	SW846 8270C SIM
	Qualifiers:	a,p					
Dibenz(a,j)acridine	ND	82.6	10.4	ng/L	13 a		SW846 8270C SIM
	ND	76.2	6.11	ng/L	8.0	52	SW846 8270C SIM
	Qualifiers:	a,p					
2,3-Benzofuran	37	82.6	84.0	ng/L	57		SW846 8270C SIM
	37	76.2	74.3	ng/L	49	12	SW846 8270C SIM
Benzo(ghi)perylene	4.7	82.6	8.71	ng/L	4.9 a		SW846 8270C SIM
	4.7	76.2	5.91	ng/L	1.6 a	38	SW846 8270C SIM
Dibenzo(a,e)pyrene	ND	82.6	5.60	ng/L	6.8 a		SW846 8270C SIM
	ND	76.2	4.24	ng/L	5.6 a	28	SW846 8270C SIM
Dibenzo(a,i)pyrene	ND	82.6	5.08	ng/L	6.2 a		SW846 8270C SIM
	ND	76.2	3.85	ng/L	5.1 a	28	SW846 8270C SIM
Dibenzo(a,h)pyrene	ND	82.6	4.25	ng/L	5.2 a		SW846 8270C SIM
	ND	76.2	3.39	ng/L	4.5 a	23	SW846 8270C SIM
Dibenzo(a,l)pyrene	ND	82.6	17.4	ng/L	21 a		SW846 8270C SIM
	ND	76.2	11.3	ng/L	15 a	43	SW846 8270C SIM
Benzo(a)pyrene	8.2	82.6	20.3	ng/L	15 a		SW846 8270C SIM
	8.2	76.2	12.7	ng/L	5.9 a	46	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	ND	82.6	41.3	ng/L	50		SW846 8270C SIM
	ND	76.2	29.5	ng/L	39	33	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K881M1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C270231-001 K881M1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,6-Dimethylnaphthalene	300	82.6	350	ng/L	60		SW846 8270C SIM
	300	76.2	310	ng/L	14 a	12	SW846 8270C SIM
Benzo(e)pyrene	5.7	82.6	15.1	ng/L	11 a		SW846 8270C SIM
	5.7	76.2	9.34	ng/L	4.7 a	47	SW846 8270C SIM
Benzo(b)thiophene	99	82.6	156	ng/L	68		SW846 8270C SIM
	99	76.2	130	ng/L	41	18	SW846 8270C SIM
3-Methylcholanthrene	ND	82.6	12.1	ng/L	15 a		SW846 8270C SIM
	ND	76.2	7.01	ng/L	9.2	53	SW846 8270C SIM
	Qualifiers:	a,p					
6-Methylchrysene	ND	82.6	21.4	ng/L	26 a		SW846 8270C SIM
	ND	76.2	11.0	ng/L	15 a,p	64	SW846 8270C SIM
1-Methylphenanthrene	44	82.6	120	ng/L	92		SW846 8270C SIM
	44	76.2	97.4	ng/L	70	21	SW846 8270C SIM
Biphenyl	3.0	82.6	57.6	ng/L	66		SW846 8270C SIM
	3.0	76.2	48.8	ng/L	60	17	SW846 8270C SIM
Carbazole	500	82.6	580	ng/L	101		SW846 8270C SIM
	500	76.2	488	ng/L	0.0 a	0.0	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	43	82.6	102	ng/L	71		SW846 8270C SIM
	43	76.2	84.8	ng/L	55	18	SW846 8270C SIM
Chrysene	18	82.6	53.0	ng/L	42		SW846 8270C SIM
	18	76.2	34.0	ng/L	21 a	44	SW846 8270C SIM
Dibenzo(a,h)anthracene	1.1	82.6	7.02	ng/L	7.1 a		SW846 8270C SIM
	1.1	76.2	4.46	ng/L	4.4 a	45	SW846 8270C SIM
Dibenzofuran	330	82.6	384	ng/L	66		SW846 8270C SIM
	330	76.2	334	ng/L	6.6 a	14	SW846 8270C SIM
Dibenzothiophene	23	82.6	83.0	ng/L	72		SW846 8270C SIM
	23	76.2	60.1	ng/L	48	32	SW846 8270C SIM
2,3-Dihydroindene	450	82.6	483	ng/L	36		SW846 8270C SIM
	450	76.2	428	ng/L	0.0 a	0.0	SW846 8270C SIM
Fluoranthene	410	82.6	504	ng/L	118		SW846 8270C SIM
	410	76.2	409	ng/L	3.7 a	21	SW846 8270C SIM
Fluorene	460	82.6	524	ng/L	77		SW846 8270C SIM
	460	76.2	450	ng/L	0.0 a	0.0	SW846 8270C SIM
Indene	55	82.6	103	ng/L	58		SW846 8270C SIM
	55	76.2	88.2	ng/L	43	16	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	3.9	82.6	8.94	ng/L	6.1 a		SW846 8270C SIM
	3.9	76.2	6.21	ng/L	3.1 a	36	SW846 8270C SIM
Indole	15	82.6	72.9	ng/L	70		SW846 8270C SIM
	15	76.2	58.0	ng/L	57	23	SW846 8270C SIM
2-Methylnaphthalene	6.7	82.6	59.9	ng/L	65		SW846 8270C SIM
	6.7	76.2	50.0	ng/L	57	18	SW846 8270C SIM
1-Methylnaphthalene	400	82.6	448	ng/L	61		SW846 8270C SIM
	400	76.2	387	ng/L	0.0 a	0.0	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C270231 **Work Order #...:** K881M1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C270231-001 K881M1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Naphthalene	**ND**	**82.6**	**55.8**	**ng/L**	**68**		**SW846 8270C SIM**
	ND	**76.2**	**45.6**	**ng/L**	**60**	**20**	**SW846 8270C SIM**
Perylene	**ND**	**82.6**	**13.1**	**ng/L**	**16 a**		**SW846 8270C SIM**
	ND	**76.2**	**7.92**	**ng/L**	**10 a**	**50**	**SW846 8270C SIM**
Phenanthrene	**5.8**	**82.6**	**64.4**	**ng/L**	**71**		**SW846 8270C SIM**
	5.8	**76.2**	**51.6**	**ng/L**	**60**	**22**	**SW846 8270C SIM**
Pyrene	**310**	**82.6**	**404**	**ng/L**	**109**		**SW846 8270C SIM**
	310	**76.2**	**326**	**ng/L**	**15 a**	**22**	**SW846 8270C SIM**
Quinoline	**15**	**82.6**	**55.6**	**ng/L**	**50**		**SW846 8270C SIM**
	15	**76.2**	**44.4**	**ng/L**	**39**	**22**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	35	(28 - 101)
	22 *	(28 - 101)
Fluorene d-10	67	(23 - 84)
	58	(23 - 84)
Naphthalene-d8	56	(22 - 97)
	52	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Chain of Custody Record

3.1, 3.6, 3.7 °C
AR1
3/27/09

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	3/26/09	150792
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
3752 Wooddale Ave.	952-924-2557		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly MN	FedEx / 8595 2067 9926		
Contract/Purchase Order/Quote No.			
01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: PAH PPT 75	Special Instructions/ Conditions of Receipt
W105-032609	3/26/09	1255		X			6						X	
W105D-032609	↓	1300		↓			↓						↓	
W105FB-032609		1245												
W105FBD-032609		1250												
W105MS-032609		1305												Matrix Spike
W105MSD-032609	↓	1310		↓			↓						↓	Matrix Spike Dup

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	AECOM	3/26/09	1500	1. Received By	3/27/9 1200 ~~0900~~ KG
2. Relinquished By				2. Received By	
3. Relinquished By				3. Received By	

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

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Memorandum

Date: March 8, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9C270231
Appendix B

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of one aqueous samples and two field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C SIM. The samples were collected on March 26, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9C270231.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W105-032609	W105D-032609
W105FB-032609	W105FBD-032609

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

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- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C..

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blank 9090409. Method blank 9088012 was burned up during the extraction process. The field blanks W105-032609FB and W105-032609FBD had 4 compounds detected, all at or below reporting limit concentrations. As none of the detected concentrations exceeded the ALs, no action was taken.

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses with the exception of one sample. The surrogate percent recovery outside (below) the acceptance criteria was chrysene-d12. No action was required since the remaining two base/neutral surrogates were within QC recovery limits in each case.

MS/MSD Results

MS/MSD analyses were performed on sample W105-032609. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
Acenapthene (MSD)	0.0		30-150		J	UJ

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Acenaphthylene (MSD)	25		30-150		J	UJ
Benzo(a)anthracene (MSD)	21		30-150		J	UJ
Benzo(b)fluoranthene (MS)	3.4		30-150		J	UJ
Benzo(b)fluoranthene (MSD)	0.0		30-150		J	UJ
Benzo(k)fluoranthene (MS)	22		30-150		J	UJ
Benzo(k)fluoranthene (MSD)	15		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MS)	18		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MSD)	11	60	30-150	0-50	J	UJ
Dibenz (a,h) acridine (MS)	11		30-150		J	UJ
Dibenz (a,h) acridine (MSD)	6.9	54	30-150	0-50	J	UJ
Dibenz (a, j) acridine (MS)	13		30-150		J	UJ
Dibenz (a, j) acridine (MSD)	8.0	52	30-150	0-50	J	UJ
Benzo(ghi)perylene (MS)	4.9		30-150		J	UJ
Benzo(ghi)perylene (MSD)	1.6		30-150		J	UJ
Dibenzo (a, e) pyrene (MS)	6.8		30-150		J	UJ
Dibenzo (a, e) pyrene (MSD)	5.6		30-150		J	UJ
Dibenzo (a, i) pyrene (MS)	6.2		30-150		J	UJ
Dibenzo (a, i) pyrene (MSD)	5.1		30-150		J	UJ
Dibenzo (a, h) pyrene (MS)	5.2		30-150		J	UJ
Dibenzo (a, h) pyrene (MSD)	4.5		30-150		J	UJ
Dibenzo (a, l) pyrene (MS)	21		30-150		J	UJ
Dibenzo (a, l) pyrene (MSD)	15		30-150		J	UJ
Benzo(a)pyrene (MS)	15		30-150		J	UJ
Benzo(a)pyrene (MSD)	5.9		30-150		J	UJ
2,6-Dimethylnaphthalene (MSD)	14		30-150		J	UJ
Benzo(e)pyrene (MS)	11		30-150		J	UJ

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Benzo(e)pyrene (MSD)	4.7		30-150		J	UJ
3-Methylcholanthrene (MS)	15		30-150		J	UJ
3-Methylcholanthrene (MSD)	9.2	53	30-150	0-50	J	UJ
6-Methylchrysene (MS)	26		30-150		J	UJ
6-Methylchrysene (MSD)	15	64	30-150	0-50	J	UJ
Carbozole (MSD)	0.0		30-150		J	UJ
Chrysene (MSD)	21		30-150		J	UJ
Dibenzo(a,h)anthracene (MS)	7.1		30-150		J	UJ
Dibenzo(a,h)anthracene (MSD)	4.4		30-150		J	UJ
Dibenzofuran (MSD)	6.6		30-150		J	UJ
2,3-Dihydroindene (MSD)	0.0		30-150		J	UJ
Fluoranthene (MSD)	3.7		30-150		J	UJ
Fluorene (MSD)	0.0		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MS)	6.1		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MSD)	3.1		30-150		J	UJ
1-Methylnaphthalene (MSD)	0.0		30-150		J	UJ
Perylene (MS)	16		30-150		J	UJ
Perylene (MSD)	10		30-150		J	UJ
Pyrene (MSD)	15		30-150		J	UJ
Associated sample: W105-032609						

LCS Results

The following table summarizes the %Rs that fell below the QC acceptance criteria for the LCS analysis.

Compound	%R (RPD)	QC Limits (RPD Limits)	Actions	
			Detects	Nondetects
Acridine	15	30-150	J	UJ
Associated samples: W105-032609				

Field Duplicate Results

Samples W105-032609/ W105D-032609 were the field duplicate pairs analyzed with this data set.

A total of 26 of 31 compounds were detected. The results for the detected compounds with RPDs outside the acceptance criteria are tabulated below. The remaining RPDs were within the acceptance criteria.

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Compound	W105-032609 (µg/L)	W105D-032609 (µg/L)	RPD
Benzo(a)pyrene	12	21	54.5
Criteria: Aqueous RPD ≤ 50, if both sample and duplicate results are ≥ 5x sample quantitation limit (SQL). The RPD criterion is doubled if both sample and duplicate results are <5x SQL.			

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W105-032609 and W105D-032609 were initially analyzed undiluted. The results of some compounds fell outside the calibration range. The samples were then diluted at 4x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.

CASE NARRATIVE
D9C130273

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Eleven samples plus two sets of MS/MSD samples were received under chain of custody on March 13, 2009. The samples were received at temperatures of 3.0°C, 1.5°C, 3.4°C, 1.6°C, 2.5°C and 1.9°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

Samples W420-031209 and W420D-031209 were analyzed at three different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for those analyses performed at a 4x or greater dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

The MS/MSD associated with QC batch 9076126 was performed using sample W420-031209, as requested. The Matrix Spike exhibited percent recoveries outside the control limits for 2,3-Dihydroindene, 2-Methylnaphthalene and Naphthalene. The Matrix Spike Duplicate exhibited percent recoveries outside the control limits for 2,3-Dihydroindene and Naphthalene. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports. The laboratory noted that matrix interference is obvious due to elevated concentrations of target and non-target analytes.

No other anomalies were noted.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Sample W105-031209 was originally logged for PAH ppb (8270C full scan) due to laboratory oversight. This error was not discovered until after the recommended sample holding time had expired. In order to analyze sample W105-031209 for PAH ppt-75 (8270C-SIM) within the recommended sample holding time, the laboratory used the 8270C full scan extract for the 8270C-SIM analysis. These results are reported in this submission. The client was notified of this anomaly on March 26, 2009. Please note that the PAH ppb (8270C full scan) LCS associated with QC batch 9076126 also supports the PAH ppt-75 (8270C-SIM) QC batch 9086161.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

Surrogate Chrysene-d12 was recovered below the lower control limit in samples SLP6D-031209 and SLP4T-031209. Re-extraction was not possible due to insufficient remaining sample volume. The laboratory noted that matrix interference was obvious upon evaluation of the chromatograms, as there was a significant baseline rise and interference from non-target compounds. Therefore, further corrective action was deemed unnecessary.

Low levels of Naphthalene and Phenanthrene were present in the method blank associated with QC batch 9074014. Because the concentrations in the method blank were not present at levels greater than the reporting limits, corrective action was deemed unnecessary.

Low levels of Acenaphthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(e)pyrene, Dibenzofuran, Fluorene, Indole, 2-Methylnaphthalene, 1-Methylnaphthalene and Phenanthrene were present in the method blank associated with QC batch 9086161. Because the concentrations in the method blank were not present at levels greater than the reporting limits, corrective action was deemed unnecessary.

2,3-Dihydroindene, Fluoranthene and Pyrene were present above the reporting limits in the method blank associated with QC batch 9086161. As the associated sample amounts for these compounds were at least ten times greater than the method blank concentrations, corrective action was deemed unnecessary.

Naphthalene was present above the reporting limit in the method blank associated with QC batch 9086161. As no detectable concentration of Naphthalene was present in the associated sample, corrective action was deemed unnecessary.

Chrysene was present above the reporting limit in the method blank associated with QC batch 9086161, as well as, in sample W105-031209. This trend in data indicates that laboratory contamination is probable. The client was notified of this anomaly on March 30, 2009 and indicated that corrective action was deemed unnecessary, as the concentration of Naphthalene in the method blank, as well as, in sample W105-031209 was less than five times the reporting limit.

The LCS associated with QC batch 9074014 exhibited recoveries below the lower control limits for Acridine, Dibenz(a,j)acridine and Quinoline. Analyte Dibenzo(a,j)acridine, recovered at 18% (limits 30-150%), is not a compound of interest for this project; therefore, corrective action was deemed unnecessary. Acridine was recovered at 5% (limits 30-150%) and Quinoline was recovered at 25% (limits 30-150%). The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

The MS/MSD associated with QC batch 9074014 was performed using sample SLP6-031209, as requested. MS/MSD exhibited 17 of the 44 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 19 of the 44 Matrix Spike Duplicate compound recoveries and one of the three surrogate recoveries outside the control limits. The MS/MSD exhibited 2 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports. The laboratory noted that matrix interference was obvious upon evaluation of the chromatograms, as there was a significant baseline rise affecting the recovery of these compounds.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

Acridine	Benzo(a)anthracene	Benzo(b)fluoranthene
Benzo(k)fluoranthene	7H-Dibenzo[c,g]carbazole	Dibenz(a,h)acridine
Dibenz(a,j)acridine	Benzo(ghi)perylene	Dibenzo(a,e)pyrene
Dibenzo(a,i)pyrene	Dibenzo(a,h)pyrene	Dibenzo(a,l),pyrene
Benzo(a)pyrene	Benzo(e)pyrene	3-Methylcholanthrene
6-Methylchrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene
Perylene	Chrysene-d12	

No other anomalies were noted.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION LOT: D9C130273 ANALYSIS: SW846-8270C		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	62
MS	7	5
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	15	15
Samples and QC Internal Standard Area	27	27
TOTAL	**206**	**202**
% Completeness	**98.1%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9C130273					
Sample: W420-031209		**DUP: W420D-031209**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	130	Acenaphthene	140	7.4	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	1.8	Acridine	1.6	11.8	
Anthracene	2.3	Anthracene	2.2	4.4	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	19	2,3-Benzofuran	19	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	94	Benzo(b)thiophene	94	0.0	
Biphenyl	15	Biphenyl	15	0.0	
Carbazole	81	Carbazole	85	4.8	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	43	Dibenzofuran	45	4.5	
Dibenzothiophene	12	Dibenzothiophene	13	8.0	
2,3-Dihydroindene	200	2,3-Dihydroindene	200	0.0	
Fluoranthene	1.2	Fluoranthene	1.2	0.0	
Fluorene	48	Fluorene	50	4.1	
Indene	16	Indene	17	6.1	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	120	2-Methylnaphthalene	120	0.0	
1-Methylnaphthalene	130	1-Methylnaphthalene	130	0.0	
Naphthalene	1100	Naphthalene	580	61.9	p
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	37	Phenanthrene	40	7.8	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND. Considered acceptable if the positive

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION LOT: D9C130273 ANALYSIS: SW846-8270C SIM		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	62	57
MB Surrogates	6	6
LCS	7	6
LCS Surrogates	3	3
FB/FBD	31	31
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	21	19
Samples and QC Internal Standard Area	33	33
TOTAL	**221**	**210**
% Completeness	**95.0%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9C130273					
Sample: SLP6-031209		**DUP: SLP6D-031209**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	90	Acenaphthene	94	4.3	
Acenaphthylene	11	Acenaphthylene	11	0.0	
Acridine	ND	Acridine	6.7	NC	
Anthracene	2.4	Anthracene	1.7	34.1	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	7.7	Benzo(b)thiophene	7.8	1.3	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	1.8	Carbazole	2.0	10.5	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	1.8	NC	
Dibenzothiophene	1.6	Dibenzothiophene	1.5	6.5	
2,3-Dihydroindene	60	2,3-Dihydroindene	62	3.3	
Fluoranthene	5.4	Fluoranthene	5.2	3.8	
Fluorene	1.2	Fluorene	ND	NC	
Indene	4.6	Indene	4.6	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	1.4	1-Methylnaphthalene	1.4	0.0	
Naphthalene	3.1	Naphthalene	3.5	12.1	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	4.2	Phenanthrene	ND	NC	
Pyrene	2.7	Pyrene	2.8	3.6	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9C130273

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP6-031209 03/12/09 11:30 001				
Acenaphthene	90	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	11	4.8	ng/L	SW846 8270C SIM
Anthracene	2.4 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	7.7	5.2	ng/L	SW846 8270C SIM
Carbazole	1.8 J	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	1.6 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	60	5.0	ng/L	SW846 8270C SIM
Fluoranthene	5.4	4.6	ng/L	SW846 8270C SIM
Fluorene	1.2 J	4.1	ng/L	SW846 8270C SIM
Indene	4.6 J	4.7	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.4 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	3.1 J,B	8.6	ng/L	SW846 8270C SIM
Phenanthrene	4.2 J,B	6.3	ng/L	SW846 8270C SIM
Pyrene	2.7 J	4.2	ng/L	SW846 8270C SIM
SLP6D-031209 03/12/09 11:35 002				
Acenaphthene	94	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	11	4.8	ng/L	SW846 8270C SIM
Acridine	6.7	6.5	ng/L	SW846 8270C SIM
Anthracene	1.7 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	7.8	5.2	ng/L	SW846 8270C SIM
Carbazole	2.0 J	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	1.8 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.5 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	62	5.0	ng/L	SW846 8270C SIM
Fluoranthene	5.2	4.6	ng/L	SW846 8270C SIM
Indene	4.6 J	4.7	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.4 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	3.5 J,B	8.6	ng/L	SW846 8270C SIM
Pyrene	2.8 J	4.2	ng/L	SW846 8270C SIM
SLP6FB-031209 03/12/09 11:20 003				
Naphthalene	1.6 J,B	8.6	ng/L	SW846 8270C SIM
SLP6FBD-031209 03/12/09 11:25 004				
Naphthalene	1.6 J,B	8.6	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9C130273

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W420-031209 03/12/09 13:50 005				
Acenaphthene	130	10	ug/L	SW846 8270C
Acridine	1.8 J	10	ug/L	SW846 8270C
Anthracene	2.3 J	10	ug/L	SW846 8270C
2,3-Benzofuran	19	10	ug/L	SW846 8270C
Benzo(b)thiophene	94	10	ug/L	SW846 8270C
Biphenyl	15	10	ug/L	SW846 8270C
Carbazole	81	10	ug/L	SW846 8270C
Dibenzofuran	43	10	ug/L	SW846 8270C
Dibenzothiophene	12	10	ug/L	SW846 8270C
2,3-Dihydroindene	200	20	ug/L	SW846 8270C
Fluoranthene	1.2 J	10	ug/L	SW846 8270C
Fluorene	48	10	ug/L	SW846 8270C
Indene	16	10	ug/L	SW846 8270C
2-Methylnaphthalene	120	10	ug/L	SW846 8270C
1-Methylnaphthalene	130	10	ug/L	SW846 8270C
Naphthalene	1100	100	ug/L	SW846 8270C
Phenanthrene	37	10	ug/L	SW846 8270C
W420D-031209 03/12/09 13:55 006				
Acenaphthene	140	10	ug/L	SW846 8270C
Acridine	1.6 J	10	ug/L	SW846 8270C
Anthracene	2.2 J	10	ug/L	SW846 8270C
2,3-Benzofuran	19	10	ug/L	SW846 8270C
Benzo(b)thiophene	94	10	ug/L	SW846 8270C
Biphenyl	15	10	ug/L	SW846 8270C
Carbazole	85	10	ug/L	SW846 8270C
Dibenzofuran	45	10	ug/L	SW846 8270C
Dibenzothiophene	13	10	ug/L	SW846 8270C
2,3-Dihydroindene	200	20	ug/L	SW846 8270C
Fluoranthene	1.2 J	10	ug/L	SW846 8270C
Fluorene	50	10	ug/L	SW846 8270C
Indene	17	10	ug/L	SW846 8270C
2-Methylnaphthalene	120	10	ug/L	SW846 8270C
1-Methylnaphthalene	130	10	ug/L	SW846 8270C
Naphthalene	580	40	ug/L	SW846 8270C
Phenanthrene	40	10	ug/L	SW846 8270C
SLP4T-031209 03/11/09 10:20 009				
Naphthalene	1.3 J,B	8.6	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9C130273

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP10T-031209 03/12/09 09:40 010				
Acenaphthene	0.91 J	5.7	ng/L	SW846 8270C SIM
2,3-Dihydroindene	1.0 J	5.0	ng/L	SW846 8270C SIM
Naphthalene	1.4 J,B	8.6	ng/L	SW846 8270C SIM
W105-031209 03/12/09 14:00 011				
Acenaphthene	850 B	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	220	4.8	ng/L	SW846 8270C SIM
Acridine	43	6.5	ng/L	SW846 8270C SIM
Anthracene	76	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	190	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	37	4.7	ng/L	SW846 8270C SIM
2,3-Benzofuran	22	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	9.1	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	20 B	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	16 B	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	270	5.2	ng/L	SW846 8270C SIM
Carbazole	540	3.8	ng/L	SW846 8270C SIM
Chrysene	26 B	5.6	ng/L	SW846 8270C SIM
Dibenzofuran	240 B	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	65	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	250 B	5.0	ng/L	SW846 8270C SIM
Fluoranthene	540 B	4.6	ng/L	SW846 8270C SIM
Fluorene	370 B	4.1	ng/L	SW846 8270C SIM
Indene	39	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	7.7	5.4	ng/L	SW846 8270C SIM
Indole	16 B	4.7	ng/L	SW846 8270C SIM
1-Methylnaphthalene	150 B	5.6	ng/L	SW846 8270C SIM
Perylene	3.9	3.8	ng/L	SW846 8270C SIM
Phenanthrene	9.8 B	6.3	ng/L	SW846 8270C SIM
Pyrene	400 B	4.2	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9C130273

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9C130273

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Ashley Wolfe	004211
SW846 8270C SIM	Ashley Wolfe	004211

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9C130273

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K8HXX	001	SLP6-031209	03/12/09	11:30
K8HX4	002	SLP6D-031209	03/12/09	11:35
K8HX9	003	SLP6FB-031209	03/12/09	11:20
K8H0C	004	SLP6FBD-031209	03/12/09	11:25
K8H0E	005	W420-031209	03/12/09	13:50
K8H0N	006	W420D-031209	03/12/09	13:55
K8H0X	007	W420FB-031209	03/12/09	13:40
K8H00	008	W420FBD-031209	03/12/09	13:45
K8H02	009	SLP4T-031209	03/11/09	10:20
K8H06	010	SLP10T-031209	03/12/09	09:40
K8H08	011	W105-031209	03/12/09	14:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W420-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-005 **Work Order #...:** K8H0E1AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/24/09
Prep Batch #...: 9076126 **Analysis Time..:** 12:22
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**130**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	**1.8 J**	**10**	**ug/L**
Anthracene	**2.3 J**	**10**	**ug/L**
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	**19**	**10**	**ug/L**
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**94**	**10**	**ug/L**
Biphenyl	**15**	**10**	**ug/L**
Carbazole	**81**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**43**	**10**	**ug/L**
Dibenzothiophene	**12**	**10**	**ug/L**
Fluoranthene	**1.2 J**	**10**	**ug/L**
Fluorene	**48**	**10**	**ug/L**
Indene	**16**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**120**	**10**	**ug/L**
1-Methylnaphthalene	**130**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**37**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	45	(30 - 160)
Fluorene d-10	71	(36 - 127)
Naphthalene-d8	68	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-005 **Work Order #...:** K8H0E2AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/25/09
Prep Batch #...: 9076126 **Analysis Time..:** 14:52
Dilution Factor: 2
Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,3-Dihydroindene	**200**	**20**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	45	(30 - 160)
Fluorene d-10	69	(36 - 127)
Naphthalene-d8	66	(37 - 107)

City of Saint Louis Park

Client Sample ID: W420-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-005 **Work Order #...:** K8H0E3AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/25/09
Prep Batch #...: 9076126 **Analysis Time..:** 11:07
Dilution Factor: 10

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**1100**	**100**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W420D-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-006	**Work Order #...:** K8H0N1AA	**Matrix.....:** WG	
Date Sampled...: 03/12/09	**Date Received..:** 03/13/09		
Prep Date.....: 03/17/09	**Analysis Date..:** 03/24/09		
Prep Batch #...: 9076126	**Analysis Time..:** 16:07		
Dilution Factor: 1			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**140**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	**1.6 J**	**10**	**ug/L**
Anthracene	**2.2 J**	**10**	**ug/L**
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	**19**	**10**	**ug/L**
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**94**	**10**	**ug/L**
Biphenyl	**15**	**10**	**ug/L**
Carbazole	**85**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**45**	**10**	**ug/L**
Dibenzothiophene	**13**	**10**	**ug/L**
Fluoranthene	**1.2 J**	**10**	**ug/L**
Fluorene	**50**	**10**	**ug/L**
Indene	**17**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**120**	**10**	**ug/L**
1-Methylnaphthalene	**130**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**40**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	54	(30 - 160)
Fluorene d-10	74	(36 - 127)
Naphthalene-d8	66	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420D-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-006 **Work Order #...:** K8H0N2AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/25/09
Prep Batch #...: 9076126 **Analysis Time..:** 15:27
Dilution Factor: 2

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,3-Dihydroindene	**200**	**20**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	54	(30 - 160)
Fluorene d-10	72	(36 - 127)
Naphthalene-d8	66	(37 - 107)

City of Saint Louis Park

Client Sample ID: W420D-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-006	**Work Order #...:** K8H0N3AA	**Matrix.....:** WG	
Date Sampled...: 03/12/09	**Date Received..:** 03/13/09		
Prep Date.....: 03/17/09	**Analysis Date..:** 03/25/09		
Prep Batch #...: 9076126	**Analysis Time..:** 11:41		
Dilution Factor: 4			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**580**	**40**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W420FB-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-007 **Work Order #...:** K8H0X1AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/24/09
Prep Batch #...: 9076126 **Analysis Time..:** 16:40
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	73	(30 - 160)
Fluorene d-10	69	(36 - 127)
Naphthalene-d8	70	(37 - 107)

City of Saint Louis Park

Client Sample ID: W420FBD-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-008 **Work Order #...:** K8H001AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/24/09
Prep Batch #...: 9076126 **Analysis Time..:** 17:14
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	73	(30 - 160)
Fluorene d-10	70	(36 - 127)
Naphthalene-d8	71	(37 - 107)

City of Saint Louis Park

Client Sample ID: W105-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-011 **Work Order #...:** K8H081AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/25/09
Prep Batch #...: 9076126 **Analysis Time..:** 10:33
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	79	(30 - 160)
Fluorene d-10	73	(36 - 127)
Naphthalene-d8	74	(37 - 107)

City of Saint Louis Park

Client Sample ID: SLP6-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-001 **Work Order #...:** K8HXX1AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 09:55
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**90**	**5.7**	**ng/L**
Acenaphthylene	**11**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**2.4 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**7.7**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.8 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**1.6 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**60**	**5.0**	**ng/L**
Fluoranthene	**5.4**	**4.6**	**ng/L**
Fluorene	**1.2 J**	**4.1**	**ng/L**
Indene	**4.6 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	**1.4 J**	**5.6**	**ng/L**
Naphthalene	**3.1 J,B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**4.2 J,B**	**6.3**	**ng/L**
Pyrene	**2.7 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	35	(28 - 101)
Fluorene d-10	69	(23 - 84)
Naphthalene-d8	57	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: SLP6D-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-002 **Work Order #...:** K8HX41AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 12:13
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**94**	**5.7**	**ng/L**
Acenaphthylene	**11**	**4.8**	**ng/L**
Acridine	**6.7**	**6.5**	**ng/L**
Anthracene	**1.7 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**7.8**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**2.0 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**1.8 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.5 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**62**	**5.0**	**ng/L**
Fluoranthene	**5.2**	**4.6**	**ng/L**
Fluorene	ND	4.1	ng/L
Indene	**4.6 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	**1.4 J**	**5.6**	**ng/L**
Naphthalene	**3.5 J,B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**2.8 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	25 *	(28 - 101)
Fluorene d-10	67	(23 - 84)
Naphthalene-d8	59	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: SLP6FB-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-003 **Work Order #...:** K8HX91AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 12:47
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.6 J,B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	62	(28 - 101)
Fluorene d-10	67	(23 - 84)
Naphthalene-d8	54	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: SLP6FBD-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-004 **Work Order #...:** K8H0C1AA **Matrix.....:** WG
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 13:21
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.6 J,B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	64	(28 - 101)
Fluorene d-10	63	(23 - 84)
Naphthalene-d8	53	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: SLP4T-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-009 **Work Order #...:** K8H021AA **Matrix.....:** WG
Date Sampled...: 03/11/09 **Date Received..:** 03/13/09
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 13:55
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.3 J,B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	22 *	(28 - 101)
Fluorene d-10	60	(23 - 84)
Naphthalene-d8	49	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: SLP10T-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-010	**Work Order #...:** K8H061AA	**Matrix.....:** WG	
Date Sampled...: 03/12/09	**Date Received..:** 03/13/09		
Prep Date.....: 03/15/09	**Analysis Date..:** 03/30/09		
Prep Batch #...: 9074014	**Analysis Time..:** 14:28		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**0.91 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**1.0 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.4 J,B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	30	(28 - 101)
Fluorene d-10	68	(23 - 84)
Naphthalene-d8	57	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: W105-031209

GC/MS Semivolatiles

Lot-Sample #...: D9C130273-011	**Work Order #...:** K8H081AC	**Matrix.....:** WG	
Date Sampled...: 03/12/09	**Date Received..:** 03/13/09		
Prep Date.....: 03/17/09	**Analysis Date..:** 03/26/09		
Prep Batch #...: 9086161	**Analysis Time..:** 16:20		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**850 B**	**5.7**	**ng/L**
Acenaphthylene	**220**	**4.8**	**ng/L**
Acridine	**43**	**6.5**	**ng/L**
Anthracene	**76**	**4.2**	**ng/L**
Benzo(a)anthracene	**190**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**37**	**4.7**	**ng/L**
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	**22**	**5.4**	**ng/L**
Benzo(ghi)perylene	**9.1**	**6.2**	**ng/L**
Benzo(a)pyrene	**20 B**	**2.5**	**ng/L**
Benzo(e)pyrene	**16 B**	**4.3**	**ng/L**
Benzo(b)thiophene	**270**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**540**	**3.8**	**ng/L**
Chrysene	**26 B**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**240 B**	**5.7**	**ng/L**
Dibenzothiophene	**65**	**4.1**	**ng/L**
2,3-Dihydroindene	**250 B**	**5.0**	**ng/L**
Fluoranthene	**540 B**	**4.6**	**ng/L**
Fluorene	**370 B**	**4.1**	**ng/L**
Indene	**39**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	**7.7**	**5.4**	**ng/L**
Indole	**16 B**	**4.7**	**ng/L**
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	**150 B**	**5.6**	**ng/L**
Naphthalene	ND	8.6	ng/L
Perylene	**3.9**	**3.8**	**ng/L**
Phenanthrene	**9.8 B**	**6.3**	**ng/L**
Pyrene	**400 B**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	47	(28 - 101)
Fluorene d-10	61	(23 - 84)
Naphthalene-d8	37	(22 - 97)

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

QC DATA ASSOCIATION SUMMARY

D9C130273

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9074014	9074004
002	WG	SW846 8270C SIM		9074014	9074004
003	WG	SW846 8270C SIM		9074014	9074004
004	WG	SW846 8270C SIM		9074014	9074004
005	WG	SW846 8270C		9076126	9076056
006	WG	SW846 8270C		9076126	9076056
007	WG	SW846 8270C		9076126	9076056
008	WG	SW846 8270C		9076126	9076056
009	WG	SW846 8270C SIM		9074014	9074004
010	WG	SW846 8270C SIM		9074014	9074004
011	WG	SW846 8270C SIM		9086161	
	WG	SW846 8270C		9076126	9076056

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8L0V1AA **Matrix.....:** WATER
MB Lot-Sample #: D9C170000-126

Prep Date.....: 03/17/09 **Analysis Time..:** 08:12
Analysis Date..: 03/24/09 **Prep Batch #...:** 9076126
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	74	(30 - 160)
Fluorene d-10	66	(36 - 127)
Naphthalene-d8	68	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 Work Order #...: K8L0V1AC Matrix.....: WATER
LCS Lot-Sample#: D9C170000-126
Prep Date.....: 03/17/09 Analysis Date..: 03/24/09
Prep Batch #...: 9076126 Analysis Time..: 08:46
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	81	(30 - 150)	SW846 8270C
Acenaphthylene	80	(30 - 150)	SW846 8270C
Acridine	78	(30 - 150)	SW846 8270C
Anthracene	88	(30 - 150)	SW846 8270C
Benzo(a)anthracene	84	(30 - 150)	SW846 8270C
Benzo(b)fluoranthene	78	(30 - 150)	SW846 8270C
Benzo(k)fluoranthene	83	(30 - 150)	SW846 8270C
7H-Dibenzo[c,g]carbazole	83	(30 - 150)	SW846 8270C
Dibenz(a,h)acridine	81	(30 - 150)	SW846 8270C
Dibenz(a,j)acridine	79	(30 - 150)	SW846 8270C
2,3-Benzofuran	56	(30 - 150)	SW846 8270C
Benzo(ghi)perylene	86	(30 - 150)	SW846 8270C
Dibenzo(a,e)pyrene	78	(30 - 150)	SW846 8270C
Dibenzo(a,i)pyrene	50	(30 - 150)	SW846 8270C
Dibenzo(a,h)pyrene	44	(30 - 150)	SW846 8270C
Dibenzo(a,l)pyrene	75	(30 - 150)	SW846 8270C
Benzo(a)pyrene	83	(30 - 150)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	60	(30 - 150)	SW846 8270C
2,6-Dimethylnaphthalene	77	(30 - 150)	SW846 8270C
Benzo(e)pyrene	84	(30 - 150)	SW846 8270C
Benzo(b)thiophene	74	(30 - 150)	SW846 8270C
3-Methylcholanthrene	75	(30 - 150)	SW846 8270C
6-Methylchrysene	81	(30 - 150)	SW846 8270C
1-Methylphenanthrene	86	(30 - 150)	SW846 8270C
Biphenyl	75	(30 - 150)	SW846 8270C
Carbazole	89	(30 - 150)	SW846 8270C
2,3,5-Trimethylnaphthalen	79	(30 - 150)	SW846 8270C
Chrysene	88	(43 - 124)	SW846 8270C
Dibenzo(a,h)anthracene	71	(30 - 150)	SW846 8270C
Dibenzofuran	80	(30 - 150)	SW846 8270C
Dibenzothiophene	85	(30 - 150)	SW846 8270C
2,3-Dihydroindene	52	(30 - 150)	SW846 8270C
Fluoranthene	89	(30 - 150)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8L0V1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C170000-126

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**81**	**(51 - 120)**	**SW846 8270C**
Indene	**60**	**(49 - 108)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**80**	**(30 - 150)**	**SW846 8270C**
Indole	**78**	**(30 - 150)**	**SW846 8270C**
2-Methylnaphthalene	**70**	**(47 - 138)**	**SW846 8270C**
1-Methylnaphthalene	**71**	**(30 - 150)**	**SW846 8270C**
Naphthalene	**70**	**(43 - 128)**	**SW846 8270C**
Perylene	**84**	**(30 - 150)**	**SW846 8270C**
Phenanthrene	**89**	**(30 - 150)**	**SW846 8270C**
Pyrene	**91**	**(30 - 150)**	**SW846 8270C**
Quinoline	**75**	**(40 - 126)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	78	(30 - 160)
Fluorene d-10	74	(36 - 127)
Naphthalene-d8	73	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8L0V1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C170000-126
Prep Date.....: 03/17/09 **Analysis Date..:** 03/24/09
Prep Batch #...: 9076126 **Analysis Time..:** 08:46
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	50.0	40.5	ug/L	81	SW846 8270C
Acenaphthylene	50.0	40.2	ug/L	80	SW846 8270C
Acridine	50.0	39.2	ug/L	78	SW846 8270C
Anthracene	50.0	44.1	ug/L	88	SW846 8270C
Benzo(a)anthracene	50.0	42.0	ug/L	84	SW846 8270C
Benzo(b)fluoranthene	50.0	39.0	ug/L	78	SW846 8270C
Benzo(k)fluoranthene	50.0	41.7	ug/L	83	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	41.4	ug/L	83	SW846 8270C
Dibenz(a,h)acridine	50.0	40.6	ug/L	81	SW846 8270C
Dibenz(a,j)acridine	50.0	39.4	ug/L	79	SW846 8270C
2,3-Benzofuran	50.0	28.1	ug/L	56	SW846 8270C
Benzo(ghi)perylene	50.0	42.8	ug/L	86	SW846 8270C
Dibenzo(a,e)pyrene	50.0	39.0	ug/L	78	SW846 8270C
Dibenzo(a,i)pyrene	50.0	25.1	ug/L	50	SW846 8270C
Dibenzo(a,h)pyrene	50.0	22.0	ug/L	44	SW846 8270C
Dibenzo(a,l)pyrene	50.0	37.6	ug/L	75	SW846 8270C
Benzo(a)pyrene	50.0	41.7	ug/L	83	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	29.8	ug/L	60	SW846 8270C
2,6-Dimethylnaphthalene	50.0	38.5	ug/L	77	SW846 8270C
Benzo(e)pyrene	50.0	42.2	ug/L	84	SW846 8270C
Benzo(b)thiophene	50.0	37.1	ug/L	74	SW846 8270C
3-Methylcholanthrene	50.0	37.7	ug/L	75	SW846 8270C
6-Methylchrysene	50.0	40.7	ug/L	81	SW846 8270C
1-Methylphenanthrene	50.0	42.8	ug/L	86	SW846 8270C
Biphenyl	50.0	37.7	ug/L	75	SW846 8270C
Carbazole	50.0	44.3	ug/L	89	SW846 8270C
2,3,5-Trimethylnaphthalen	50.0	39.7	ug/L	79	SW846 8270C
Chrysene	50.0	43.8	ug/L	88	SW846 8270C
Dibenzo(a,h)anthracene	50.0	35.4	ug/L	71	SW846 8270C
Dibenzofuran	50.0	40.2	ug/L	80	SW846 8270C
Dibenzothiophene	50.0	42.6	ug/L	85	SW846 8270C
2,3-Dihydroindene	50.0	25.9	ug/L	52	SW846 8270C
Fluoranthene	50.0	44.4	ug/L	89	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8L0V1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C170000-126

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**50.0**	**40.6**	**ug/L**	**81**	**SW846 8270C**
Indene	**50.0**	**30.0**	**ug/L**	**60**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**50.0**	**39.9**	**ug/L**	**80**	**SW846 8270C**
Indole	**50.0**	**39.2**	**ug/L**	**78**	**SW846 8270C**
2-Methylnaphthalene	**50.0**	**34.8**	**ug/L**	**70**	**SW846 8270C**
1-Methylnaphthalene	**50.0**	**35.5**	**ug/L**	**71**	**SW846 8270C**
Naphthalene	**50.0**	**35.1**	**ug/L**	**70**	**SW846 8270C**
Perylene	**50.0**	**42.2**	**ug/L**	**84**	**SW846 8270C**
Phenanthrene	**50.0**	**44.5**	**ug/L**	**89**	**SW846 8270C**
Pyrene	**50.0**	**45.6**	**ug/L**	**91**	**SW846 8270C**
Quinoline	**50.0**	**37.7**	**ug/L**	**75**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	78	(30 - 160)
Fluorene d-10	74	(36 - 127)
Naphthalene-d8	73	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8H0E1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-005 K8H0E1AD-MSD
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/24/09
Prep Batch #...: 9076126 **Analysis Time..:** 15:00
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	55	(30 - 150)			SW846 8270C
	74	(30 - 150)	5.4	(0-30)	SW846 8270C
Acenaphthylene	72	(30 - 150)			SW846 8270C
	75	(30 - 150)	3.6	(0-30)	SW846 8270C
Acridine	74	(30 - 150)			SW846 8270C
	84	(30 - 150)	11	(0-30)	SW846 8270C
Anthracene	78	(30 - 150)			SW846 8270C
	84	(30 - 150)	6.5	(0-30)	SW846 8270C
Benzo(a)anthracene	70	(30 - 150)			SW846 8270C
	77	(30 - 150)	8.8	(0-30)	SW846 8270C
Benzo(b)fluoranthene	65	(30 - 150)			SW846 8270C
	71	(30 - 150)	7.8	(0-30)	SW846 8270C
Benzo(k)fluoranthene	69	(30 - 150)			SW846 8270C
	75	(30 - 150)	7.2	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	74	(30 - 150)			SW846 8270C
	80	(30 - 150)	7.7	(0-30)	SW846 8270C
Dibenz(a,h)acridine	71	(30 - 150)			SW846 8270C
	75	(30 - 150)	6.3	(0-30)	SW846 8270C
Dibenz(a,j)acridine	67	(30 - 150)			SW846 8270C
	75	(30 - 150)	10	(0-30)	SW846 8270C
2,3-Benzofuran	49	(30 - 150)			SW846 8270C
	53	(30 - 150)	4.4	(0-30)	SW846 8270C
Benzo(ghi)perylene	74	(30 - 150)			SW846 8270C
	80	(30 - 150)	7.9	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	67	(30 - 150)			SW846 8270C
	73	(30 - 150)	7.8	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	49	(30 - 150)			SW846 8270C
	49	(30 - 150)	0.56	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	43	(30 - 150)			SW846 8270C
	43	(30 - 150)	0.19	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	66	(30 - 150)			SW846 8270C
	72	(30 - 150)	9.0	(0-30)	SW846 8270C
Benzo(a)pyrene	70	(30 - 150)			SW846 8270C
	77	(30 - 150)	8.4	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	53	(30 - 150)			SW846 8270C
	59	(30 - 150)	10	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	66	(30 - 150)			SW846 8270C
	72	(30 - 150)	6.1	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8H0E1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-005 K8H0E1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	71	(30 - 150)			SW846 8270C
	77	(30 - 150)	7.9	(0-30)	SW846 8270C
Benzo(b)thiophene	38	(30 - 150)			SW846 8270C
	48	(30 - 150)	4.3	(0-30)	SW846 8270C
3-Methylcholanthrene	65	(30 - 150)			SW846 8270C
	68	(30 - 150)	4.8	(0-30)	SW846 8270C
6-Methylchrysene	67	(30 - 150)			SW846 8270C
	73	(30 - 150)	7.4	(0-30)	SW846 8270C
1-Methylphenanthrene	76	(30 - 150)			SW846 8270C
	81	(30 - 150)	5.8	(0-30)	SW846 8270C
Biphenyl	65	(30 - 150)			SW846 8270C
	71	(30 - 150)	6.0	(0-30)	SW846 8270C
Carbazole	76	(30 - 150)			SW846 8270C
	89	(30 - 150)	5.2	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	73	(30 - 150)			SW846 8270C
	76	(30 - 150)	3.8	(0-30)	SW846 8270C
Chrysene	68	(43 - 124)			SW846 8270C
	77	(43 - 124)	12	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	62	(30 - 150)			SW846 8270C
	66	(30 - 150)	6.1	(0-30)	SW846 8270C
Dibenzofuran	68	(30 - 150)			SW846 8270C
	76	(30 - 150)	4.9	(0-30)	SW846 8270C
Dibenzothiophene	75	(30 - 150)			SW846 8270C
	81	(30 - 150)	5.0	(0-30)	SW846 8270C
2,3-Dihydroindene	0.0 a	(30 - 150)			SW846 8270C
	22 a	(30 - 150)	0.0	(0-30)	SW846 8270C
Fluoranthene	80	(30 - 150)			SW846 8270C
	86	(30 - 150)	6.2	(0-30)	SW846 8270C
Fluorene	69	(51 - 120)			SW846 8270C
	79	(51 - 120)	5.6	(0-30)	SW846 8270C
Indene	53	(49 - 108)			SW846 8270C
	58	(49 - 108)	5.1	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	69	(30 - 150)			SW846 8270C
	75	(30 - 150)	7.9	(0-30)	SW846 8270C
Indole	46	(30 - 150)			SW846 8270C
	51	(30 - 150)	11	(0-30)	SW846 8270C
2-Methylnaphthalene	42 a	(47 - 138)			SW846 8270C
	54	(47 - 138)	3.8	(0-30)	SW846 8270C
1-Methylnaphthalene	40	(30 - 150)			SW846 8270C
	57	(30 - 150)	5.2	(0-30)	SW846 8270C
Naphthalene	0.0 a	(43 - 128)			SW846 8270C
	5.9 a	(43 - 128)	0.0	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8H0E1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-005 K8H0E1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**72**	**(30 - 150)**			**SW846 8270C**
	77	**(30 - 150)**	**6.4**	**(0-30)**	**SW846 8270C**
Phenanthrene	**78**	**(30 - 150)**			**SW846 8270C**
	86	**(30 - 150)**	**5.0**	**(0-30)**	**SW846 8270C**
Pyrene	**81**	**(30 - 150)**			**SW846 8270C**
	88	**(30 - 150)**	**7.6**	**(0-30)**	**SW846 8270C**
Quinoline	**63**	**(40 - 126)**			**SW846 8270C**
	77	**(40 - 126)**	**19**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	33	(30 - 160)
	62	(30 - 160)
Fluorene d-10	69	(36 - 127)
	71	(36 - 127)
Naphthalene-d8	63	(37 - 107)
	64	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8H0E1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-005 K8H0E1AD-MSD
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/17/09 **Analysis Date..:** 03/24/09
Prep Batch #...: 9076126 **Analysis Time..:** 15:00
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	130	47.6	161	ug/L	55		SW846 8270C
	130	47.4	170	ug/L	74	5.4	SW846 8270C
Acenaphthylene	ND	47.6	34.3	ug/L	72		SW846 8270C
	ND	47.4	35.6	ug/L	75	3.6	SW846 8270C
Acridine	1.8	47.6	37.1	ug/L	74		SW846 8270C
	1.8	47.4	41.4	ug/L	84	11	SW846 8270C
Anthracene	2.3	47.6	39.6	ug/L	78		SW846 8270C
	2.3	47.4	42.2	ug/L	84	6.5	SW846 8270C
Benzo(a)anthracene	ND	47.6	33.2	ug/L	70		SW846 8270C
	ND	47.4	36.3	ug/L	77	8.8	SW846 8270C
Benzo(b)fluoranthene	ND	47.6	31.1	ug/L	65		SW846 8270C
	ND	47.4	33.6	ug/L	71	7.8	SW846 8270C
Benzo(k)fluoranthene	ND	47.6	33.0	ug/L	69		SW846 8270C
	ND	47.4	35.5	ug/L	75	7.2	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.6	35.1	ug/L	74		SW846 8270C
	ND	47.4	37.9	ug/L	80	7.7	SW846 8270C
Dibenz(a,h)acridine	ND	47.6	33.6	ug/L	71		SW846 8270C
	ND	47.4	35.8	ug/L	75	6.3	SW846 8270C
Dibenz(a,j)acridine	ND	47.6	32.0	ug/L	67		SW846 8270C
	ND	47.4	35.4	ug/L	75	10	SW846 8270C
2,3-Benzofuran	19	47.6	41.6	ug/L	49		SW846 8270C
	19	47.4	43.5	ug/L	53	4.4	SW846 8270C
Benzo(ghi)perylene	ND	47.6	35.1	ug/L	74		SW846 8270C
	ND	47.4	38.0	ug/L	80	7.9	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.6	31.8	ug/L	67		SW846 8270C
	ND	47.4	34.4	ug/L	73	7.8	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.6	23.1	ug/L	49		SW846 8270C
	ND	47.4	23.3	ug/L	49	0.56	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.6	20.4	ug/L	43		SW846 8270C
	ND	47.4	20.4	ug/L	43	0.19	SW846 8270C
Dibenzo(a,l)pyrene	0.0023	47.6	31.2	ug/L	66		SW846 8270C
	0.0023	47.4	34.2	ug/L	72	9.0	SW846 8270C
Benzo(a)pyrene	ND	47.6	33.4	ug/L	70		SW846 8270C
	ND	47.4	36.4	ug/L	77	8.4	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.6	25.4	ug/L	53		SW846 8270C
	ND	47.4	28.1	ug/L	59	10	SW846 8270C
2,6-Dimethylnaphthalene	11	47.6	42.6	ug/L	66		SW846 8270C
	11	47.4	45.3	ug/L	72	6.1	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8H0E1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-005 K8H0E1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.6	33.6	ug/L	71		SW846 8270C
	ND	47.4	36.4	ug/L	77	7.9	SW846 8270C
Benzo(b)thiophene	94	47.6	112	ug/L	38		SW846 8270C
	94	47.4	117	ug/L	48	4.3	SW846 8270C
3-Methylcholanthrene	ND	47.6	30.8	ug/L	65		SW846 8270C
	ND	47.4	32.3	ug/L	68	4.8	SW846 8270C
6-Methylchrysene	ND	47.6	32.0	ug/L	67		SW846 8270C
	ND	47.4	34.4	ug/L	73	7.4	SW846 8270C
1-Methylphenanthrene	0.18	47.6	36.5	ug/L	76		SW846 8270C
	0.18	47.4	38.7	ug/L	81	5.8	SW846 8270C
Biphenyl	15	47.6	45.7	ug/L	65		SW846 8270C
	15	47.4	48.5	ug/L	71	6.0	SW846 8270C
Carbazole	81	47.6	117	ug/L	76		SW846 8270C
	81	47.4	123	ug/L	89	5.2	SW846 8270C
2,3,5-Trimethylnaphthalen	0.81	47.6	35.3	ug/L	73		SW846 8270C
	0.81	47.4	36.7	ug/L	76	3.8	SW846 8270C
Chrysene	ND	47.6	32.3	ug/L	68		SW846 8270C
	ND	47.4	36.3	ug/L	77	12	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.6	29.4	ug/L	62		SW846 8270C
	ND	47.4	31.3	ug/L	66	6.1	SW846 8270C
Dibenzofuran	43	47.6	75.6	ug/L	68		SW846 8270C
	43	47.4	79.4	ug/L	76	4.9	SW846 8270C
Dibenzothiophene	12	47.6	47.8	ug/L	75		SW846 8270C
	12	47.4	50.3	ug/L	81	5.0	SW846 8270C
2,3-Dihydroindene	160	47.6	164	ug/L	0.0 a		SW846 8270C
	160	47.4	175	ug/L	22 a	0.0	SW846 8270C
Fluoranthene	1.2	47.6	39.4	ug/L	80		SW846 8270C
	1.2	47.4	41.9	ug/L	86	6.2	SW846 8270C
Fluorene	48	47.6	80.7	ug/L	69		SW846 8270C
	48	47.4	85.4	ug/L	79	5.6	SW846 8270C
Indene	16	47.6	41.4	ug/L	53		SW846 8270C
	16	47.4	43.6	ug/L	58	5.1	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.6	32.8	ug/L	69		SW846 8270C
	ND	47.4	35.5	ug/L	75	7.9	SW846 8270C
Indole	ND	47.6	21.7	ug/L	46		SW846 8270C
	ND	47.4	24.3	ug/L	51	11	SW846 8270C
2-Methylnaphthalene	120	47.6	141	ug/L	42 a		SW846 8270C
	120	47.4	146	ug/L	54	3.8	SW846 8270C
1-Methylnaphthalene	130	47.6	154	ug/L	40		SW846 8270C
	130	47.4	162	ug/L	57	5.2	SW846 8270C
Naphthalene	310	47.6	295	ug/L	0.0 a		SW846 8270C
	310	47.4	315	ug/L	5.9 a	0.0	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8H0E1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-005 K8H0E1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**47.6**	**34.1**	**ug/L**	**72**		**SW846 8270C**
	ND	**47.4**	**36.3**	**ug/L**	**77**	**6.4**	**SW846 8270C**
Phenanthrene	**37**	**47.6**	**74.5**	**ug/L**	**78**		**SW846 8270C**
	37	**47.4**	**78.3**	**ug/L**	**86**	**5.0**	**SW846 8270C**
Pyrene	**ND**	**47.6**	**38.7**	**ug/L**	**81**		**SW846 8270C**
	ND	**47.4**	**41.8**	**ug/L**	**88**	**7.6**	**SW846 8270C**
Quinoline	**ND**	**47.6**	**30.0**	**ug/L**	**63**		**SW846 8270C**
	ND	**47.4**	**36.3**	**ug/L**	**77**	**19**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	33	(30 - 160)
	62	(30 - 160)
Fluorene d-10	69	(36 - 127)
	71	(36 - 127)
Naphthalene-d8	63	(37 - 107)
	64	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8KA81AA **Matrix.....:** WATER
MB Lot-Sample #: D9C150000-014

Prep Date.....: 03/15/09 **Analysis Time..:** 08:47
Analysis Date..: 03/30/09 **Prep Batch #...:** 9074014
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	**1.4 J**	**8.6**	**ng/L**	**SW846 8270C SIM**
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	**3.9 J**	**6.3**	**ng/L**	**SW846 8270C SIM**
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	64	(28 - 101)
Fluorene d-10	78	(23 - 84)
Naphthalene-d8	51	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K88DQ1AA **Matrix.....:** WATER
MB Lot-Sample #: D9C270000-161

Prep Date.....: 03/17/09 **Analysis Time..:** 15:45
Analysis Date..: 03/26/09 **Prep Batch #...:** 9086161
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	**2.2 J**	**5.7**	**ng/L**	**SW846 8270C SIM**
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	**3.2 J**	**4.1**	**ng/L**	**SW846 8270C SIM**
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	**1.4 J**	**2.5**	**ng/L**	**SW846 8270C SIM**
Benzo(e)pyrene	**1.8 J**	**4.3**	**ng/L**	**SW846 8270C SIM**
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	**7.1**	**5.6**	**ng/L**	**SW846 8270C SIM**
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	**1.1 J**	**5.7**	**ng/L**	**SW846 8270C SIM**
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	**5.3**	**5.0**	**ng/L**	**SW846 8270C SIM**
Fluoranthene	**5.8**	**4.6**	**ng/L**	**SW846 8270C SIM**
Fluorene	**2.5 J**	**4.1**	**ng/L**	**SW846 8270C SIM**
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	**2.4 J**	**4.7**	**ng/L**	**SW846 8270C SIM**
2-Methylnaphthalene	**2.3 J**	**5.9**	**ng/L**	**SW846 8270C SIM**
1-Methylnaphthalene	**2.0 J**	**5.6**	**ng/L**	**SW846 8270C SIM**
Naphthalene	**38**	**8.6**	**ng/L**	**SW846 8270C SIM**
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	**4.5 J**	**6.3**	**ng/L**	**SW846 8270C SIM**
Pyrene	**4.3**	**4.2**	**ng/L**	**SW846 8270C SIM**
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	76	(28 - 101)
Fluorene d-10	74	(23 - 84)
Naphthalene-d8	43	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8KA81AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C150000-014
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 09:21
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	69	(30 - 150)	SW846 8270C SIM
Acenaphthylene	60	(30 - 150)	SW846 8270C SIM
Acridine	0.0 a	(30 - 150)	SW846 8270C SIM
Anthracene	76	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	65	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	61	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	94	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	147	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	50	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	18 a	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	59	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	81	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	75	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	57	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	47	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	76	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	79	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	74	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	59	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	69	(30 - 150)	SW846 8270C SIM
Benzo(b)thiophene	57	(30 - 150)	SW846 8270C SIM
3-Methylcholanthrene	64	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	80	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	61	(30 - 150)	SW846 8270C SIM
Biphenyl	63	(30 - 150)	SW846 8270C SIM
Carbazole	57	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	66	(30 - 150)	SW846 8270C SIM
Chrysene	94	(30 - 132)	SW846 8270C SIM
Dibenzo(a,h)anthracene	83	(30 - 150)	SW846 8270C SIM
Dibenzofuran	58	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	63	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	56	(30 - 150)	SW846 8270C SIM
Fluoranthene	59	(30 - 150)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8KA81AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C150000-014

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**73**	**(30 - 132)**	**SW846 8270C SIM**
Indene	**53**	**(30 - 150)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**85**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**58**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**57**	**(30 - 150)**	**SW846 8270C SIM**
1-Methylnaphthalene	**54**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**65**	**(30 - 150)**	**SW846 8270C SIM**
Perylene	**76**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**66**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**55**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**25 a**	**(30 - 150)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	62	(28 - 101)
Fluorene d-10	73	(23 - 84)
Naphthalene-d8	50	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 Work Order #...: K8KA81AC Matrix.....: WATER
LCS Lot-Sample#: D9C150000-014
Prep Date.....: 03/15/09 Analysis Date..: 03/30/09
Prep Batch #...: 9074014 Analysis Time..: 09:21
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	51.6	ng/L	69	SW846 8270C S
Acenaphthylene	75.0	45.3	ng/L	60	SW846 8270C S
Acridine	75.0	0.0 a	ng/L	0.0	SW846 8270C S
Anthracene	75.0	56.7	ng/L	76	SW846 8270C S
Benzo(a)anthracene	75.0	49.0	ng/L	65	SW846 8270C S
Benzo(b)fluoranthene	75.0	46.1	ng/L	61	SW846 8270C S
Benzo(k)fluoranthene	75.0	70.4	ng/L	94	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	110	ng/L	147	SW846 8270C S
Dibenz(a,h)acridine	75.0	37.3	ng/L	50	SW846 8270C S
Dibenz(a,j)acridine	75.0	13.6 a	ng/L	18	SW846 8270C S
2,3-Benzofuran	75.0	43.9	ng/L	59	SW846 8270C S
Benzo(ghi)perylene	75.0	60.8	ng/L	81	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	56.0	ng/L	75	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	42.6	ng/L	57	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	35.6	ng/L	47	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	57.0	ng/L	76	SW846 8270C S
Benzo(a)pyrene	75.0	59.1	ng/L	79	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	55.9	ng/L	74	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	44.1	ng/L	59	SW846 8270C S
Benzo(e)pyrene	75.0	51.7	ng/L	69	SW846 8270C S
Benzo(b)thiophene	75.0	43.0	ng/L	57	SW846 8270C S
3-Methylcholanthrene	75.0	48.3	ng/L	64	SW846 8270C S
6-Methylchrysene	75.0	60.1	ng/L	80	SW846 8270C S
1-Methylphenanthrene	75.0	45.6	ng/L	61	SW846 8270C S
Biphenyl	75.0	46.9	ng/L	63	SW846 8270C S
Carbazole	75.0	42.9	ng/L	57	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	49.5	ng/L	66	SW846 8270C S
Chrysene	75.0	70.7	ng/L	94	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	62.6	ng/L	83	SW846 8270C S
Dibenzofuran	75.0	43.2	ng/L	58	SW846 8270C S
Dibenzothiophene	75.0	47.0	ng/L	63	SW846 8270C S
2,3-Dihydroindene	75.0	42.1	ng/L	56	SW846 8270C S
Fluoranthene	75.0	44.3	ng/L	59	SW846 8270C S

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8KA81AC **Matrix.....:** WATER
LCS Lot-Sample#: D9C150000-014

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**75.0**	**55.0**	**ng/L**	**73**	**SW846 8270C S**
Indene	**75.0**	**39.8**	**ng/L**	**53**	**SW846 8270C S**
Indeno(1,2,3-cd)pyrene	**75.0**	**64.0**	**ng/L**	**85**	**SW846 8270C S**
Indole	**75.0**	**43.9**	**ng/L**	**58**	**SW846 8270C S**
2-Methylnaphthalene	**75.0**	**43.0**	**ng/L**	**57**	**SW846 8270C S**
1-Methylnaphthalene	**75.0**	**40.2**	**ng/L**	**54**	**SW846 8270C S**
Naphthalene	**75.0**	**48.9**	**ng/L**	**65**	**SW846 8270C S**
Perylene	**75.0**	**57.2**	**ng/L**	**76**	**SW846 8270C S**
Phenanthrene	**75.0**	**49.3**	**ng/L**	**66**	**SW846 8270C S**
Pyrene	**75.0**	**41.5**	**ng/L**	**55**	**SW846 8270C S**
Quinoline	**75.0**	**19.0 a**	**ng/L**	**25**	**SW846 8270C S**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	62	(28 - 101)
Fluorene d-10	73	(23 - 84)
Naphthalene-d8	50	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8HXX1AD-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-001 K8HXX1AE-MSD
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 10:30
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	79	(30 - 150)			SW846 8270C SIM
	65	(30 - 150)	6.7	(0-50)	SW846 8270C SIM
Acenaphthylene	73	(30 - 150)			SW846 8270C SIM
	68	(30 - 150)	5.5	(0-50)	SW846 8270C SIM
Acridine	85	(30 - 150)			SW846 8270C SIM
	29 a,p	(30 - 150)	96	(0-50)	SW846 8270C SIM
Anthracene	78	(30 - 150)			SW846 8270C SIM
	74	(30 - 150)	3.6	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	31	(30 - 150)			SW846 8270C SIM
	24 a	(30 - 150)	25	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	14 a	(30 - 150)			SW846 8270C SIM
	11 a	(30 - 150)	16	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	14 a	(30 - 150)			SW846 8270C SIM
	13 a	(30 - 150)	7.6	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	6.2 a	(30 - 150)			SW846 8270C SIM
	4.1 a	(30 - 150)	41	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	9.9 a	(30 - 150)			SW846 8270C SIM
	7.7 a	(30 - 150)	23	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	12 a	(30 - 150)			SW846 8270C SIM
	6.4 a,p	(30 - 150)	56	(0-50)	SW846 8270C SIM
2,3-Benzofuran	61	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.9	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	6.5 a	(30 - 150)			SW846 8270C SIM
	5.8 a	(30 - 150)	9.9	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	4.4 a	(30 - 150)			SW846 8270C SIM
	3.9 a	(30 - 150)	10	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	3.1 a	(30 - 150)			SW846 8270C SIM
	3.7 a	(30 - 150)	18	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	2.7 a	(30 - 150)			SW846 8270C SIM
	2.1 a	(30 - 150)	25	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	15 a	(30 - 150)			SW846 8270C SIM
	12 a	(30 - 150)	23	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	12 a	(30 - 150)			SW846 8270C SIM
	9.6 a	(30 - 150)	23	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	77	(30 - 150)			SW846 8270C SIM
	73	(30 - 150)	4.3	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	68	(30 - 150)			SW846 8270C SIM
	63	(30 - 150)	6.7	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8HXX1AD-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-001 K8HXX1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	12 a	(30 - 150)			SW846 8270C SIM
	8.8 a	(30 - 150)	25	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	66	(30 - 150)			SW846 8270C SIM
	62	(30 - 150)	4.7	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	14 a	(30 - 150)			SW846 8270C SIM
	10 a	(30 - 150)	26	(0-50)	SW846 8270C SIM
6-Methylchrysene	26 a	(30 - 150)			SW846 8270C SIM
	20 a	(30 - 150)	25	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	78	(30 - 150)			SW846 8270C SIM
	72	(30 - 150)	7.0	(0-50)	SW846 8270C SIM
Biphenyl	71	(30 - 150)			SW846 8270C SIM
	66	(30 - 150)	6.1	(0-50)	SW846 8270C SIM
Carbazole	81	(30 - 150)			SW846 8270C SIM
	75	(30 - 150)	5.7	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	71	(30 - 150)			SW846 8270C SIM
	68	(30 - 150)	4.0	(0-50)	SW846 8270C SIM
Chrysene	39	(30 - 132)			SW846 8270C SIM
	31	(30 - 132)	20	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	4.9 a	(30 - 150)			SW846 8270C SIM
	4.6 a	(30 - 150)	5.1	(0-50)	SW846 8270C SIM
Dibenzofuran	70	(30 - 150)			SW846 8270C SIM
	66	(30 - 150)	4.6	(0-50)	SW846 8270C SIM
Dibenzothiophene	69	(30 - 150)			SW846 8270C SIM
	65	(30 - 150)	5.0	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	66	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	6.8	(0-50)	SW846 8270C SIM
Fluoranthene	76	(30 - 150)			SW846 8270C SIM
	68	(30 - 150)	8.8	(0-50)	SW846 8270C SIM
Fluorene	71	(30 - 132)			SW846 8270C SIM
	68	(30 - 132)	3.9	(0-50)	SW846 8270C SIM
Indene	62	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.7	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	6.5 a	(30 - 150)			SW846 8270C SIM
	5.3 a	(30 - 150)	20	(0-50)	SW846 8270C SIM
Indole	70	(30 - 150)			SW846 8270C SIM
	68	(30 - 150)	2.1	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	68	(30 - 150)			SW846 8270C SIM
	62	(30 - 150)	7.3	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	71	(30 - 150)			SW846 8270C SIM
	67	(30 - 150)	5.5	(0-50)	SW846 8270C SIM
Naphthalene	68	(30 - 150)			SW846 8270C SIM
	64	(30 - 150)	4.5	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8HXX1AD-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-001 K8HXX1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**12 a**	**(30 - 150)**			**SW846 8270C SIM**
	9.4 a	**(30 - 150)**	**25**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**72**	**(30 - 150)**			**SW846 8270C SIM**
	67	**(30 - 150)**	**5.6**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**71**	**(30 - 150)**			**SW846 8270C SIM**
	64	**(30 - 150)**	**8.1**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**82**	**(30 - 150)**			**SW846 8270C SIM**
	71	**(30 - 150)**	**14**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	33	(28 - 101)
	23 *	(28 - 101)
Fluorene d-10	69	(23 - 84)
	67	(23 - 84)
Naphthalene-d8	60	(22 - 97)
	56	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8HXX1AD-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-001 K8HXX1AE-MSD
Date Sampled...: 03/12/09 **Date Received..:** 03/13/09
Prep Date.....: 03/15/09 **Analysis Date..:** 03/30/09
Prep Batch #...: 9074014 **Analysis Time..:** 10:30
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	90	75.2	150	ng/L	79		SW846 8270C SIM
	90	76.2	140	ng/L	65	6.7	SW846 8270C SIM
Acenaphthylene	11	75.2	66.1	ng/L	73		SW846 8270C SIM
	11	76.2	62.6	ng/L	68	5.5	SW846 8270C SIM
Acridine	ND	75.2	63.8	ng/L	85		SW846 8270C SIM
	ND	76.2	22.4	ng/L	29 a,p	96	SW846 8270C SIM
Anthracene	2.4	75.2	61.0	ng/L	78		SW846 8270C SIM
	2.4	76.2	58.9	ng/L	74	3.6	SW846 8270C SIM
Benzo(a)anthracene	ND	75.2	23.4	ng/L	31		SW846 8270C SIM
	ND	76.2	18.3	ng/L	24 a	25	SW846 8270C SIM
Benzo(b)fluoranthene	ND	75.2	10.3	ng/L	14 a		SW846 8270C SIM
	ND	76.2	8.70	ng/L	11 a	16	SW846 8270C SIM
Benzo(k)fluoranthene	ND	75.2	10.3	ng/L	14 a		SW846 8270C SIM
	ND	76.2	9.55	ng/L	13 a	7.6	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	ND	75.2	4.67	ng/L	6.2 a		SW846 8270C SIM
	ND	76.2	3.09	ng/L	4.1 a	41	SW846 8270C SIM
Dibenz(a,h)acridine	ND	75.2	7.44	ng/L	9.9 a		SW846 8270C SIM
	ND	76.2	5.90	ng/L	7.7 a	23	SW846 8270C SIM
Dibenz(a,j)acridine	ND	75.2	8.68	ng/L	12 a		SW846 8270C SIM
	ND	76.2	4.90	ng/L	6.4	56	SW846 8270C SIM
	Qualifiers:	a,p					
2,3-Benzofuran	ND	75.2	46.1	ng/L	61		SW846 8270C SIM
	ND	76.2	43.9	ng/L	58	4.9	SW846 8270C SIM
Benzo(ghi)perylene	ND	75.2	4.88	ng/L	6.5 a		SW846 8270C SIM
	ND	76.2	4.42	ng/L	5.8 a	9.9	SW846 8270C SIM
Dibenzo(a,e)pyrene	ND	75.2	3.28	ng/L	4.4 a		SW846 8270C SIM
	ND	76.2	2.96	ng/L	3.9 a	10	SW846 8270C SIM
Dibenzo(a,i)pyrene	ND	75.2	2.34	ng/L	3.1 a		SW846 8270C SIM
	ND	76.2	2.81	ng/L	3.7 a	18	SW846 8270C SIM
Dibenzo(a,h)pyrene	ND	75.2	2.02	ng/L	2.7 a		SW846 8270C SIM
	ND	76.2	1.57	ng/L	2.1 a	25	SW846 8270C SIM
Dibenzo(a,l)pyrene	ND	75.2	11.6	ng/L	15 a		SW846 8270C SIM
	ND	76.2	9.23	ng/L	12 a	23	SW846 8270C SIM
Benzo(a)pyrene	ND	75.2	9.17	ng/L	12 a		SW846 8270C SIM
	ND	76.2	7.28	ng/L	9.6 a	23	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	ND	75.2	57.9	ng/L	77		SW846 8270C SIM
	ND	76.2	55.4	ng/L	73	4.3	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8HXX1AD-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-001 K8HXX1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,6-Dimethylnaphthalene	ND	75.2	51.2	ng/L	68		SW846 8270C SIM
	ND	76.2	47.8	ng/L	63	6.7	SW846 8270C SIM
Benzo(e)pyrene	ND	75.2	8.71	ng/L	12 a		SW846 8270C SIM
	ND	76.2	6.74	ng/L	8.8 a	25	SW846 8270C SIM
Benzo(b)thiophene	7.7	75.2	57.6	ng/L	66		SW846 8270C SIM
	7.7	76.2	54.9	ng/L	62	4.7	SW846 8270C SIM
3-Methylcholanthrene	ND	75.2	10.3	ng/L	14 a		SW846 8270C SIM
	ND	76.2	7.89	ng/L	10 a	26	SW846 8270C SIM
6-Methylchrysene	ND	75.2	19.4	ng/L	26 a		SW846 8270C SIM
	ND	76.2	15.1	ng/L	20 a	25	SW846 8270C SIM
1-Methylphenanthrene	0.85	75.2	59.4	ng/L	78		SW846 8270C SIM
	0.85	76.2	55.4	ng/L	72	7.0	SW846 8270C SIM
Biphenyl	ND	75.2	53.2	ng/L	71		SW846 8270C SIM
	ND	76.2	50.1	ng/L	66	6.1	SW846 8270C SIM
Carbazole	1.8	75.2	62.5	ng/L	81		SW846 8270C SIM
	1.8	76.2	59.0	ng/L	75	5.7	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	ND	75.2	53.6	ng/L	71		SW846 8270C SIM
	ND	76.2	51.5	ng/L	68	4.0	SW846 8270C SIM
Chrysene	ND	75.2	29.4	ng/L	39		SW846 8270C SIM
	ND	76.2	24.0	ng/L	31	20	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	75.2	3.67	ng/L	4.9 a		SW846 8270C SIM
	ND	76.2	3.49	ng/L	4.6 a	5.1	SW846 8270C SIM
Dibenzofuran	ND	75.2	52.9	ng/L	70		SW846 8270C SIM
	ND	76.2	50.5	ng/L	66	4.6	SW846 8270C SIM
Dibenzothiophene	1.6	75.2	53.4	ng/L	69		SW846 8270C SIM
	1.6	76.2	50.8	ng/L	65	5.0	SW846 8270C SIM
2,3-Dihydroindene	60	75.2	110	ng/L	66		SW846 8270C SIM
	60	76.2	103	ng/L	56	6.8	SW846 8270C SIM
Fluoranthene	5.4	75.2	62.3	ng/L	76		SW846 8270C SIM
	5.4	76.2	57.1	ng/L	68	8.8	SW846 8270C SIM
Fluorene	1.2	75.2	54.9	ng/L	71		SW846 8270C SIM
	1.2	76.2	52.8	ng/L	68	3.9	SW846 8270C SIM
Indene	4.6	75.2	51.3	ng/L	62		SW846 8270C SIM
	4.6	76.2	49.0	ng/L	58	4.7	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	75.2	4.91	ng/L	6.5 a		SW846 8270C SIM
	ND	76.2	4.02	ng/L	5.3 a	20	SW846 8270C SIM
Indole	ND	75.2	52.8	ng/L	70		SW846 8270C SIM
	ND	76.2	51.7	ng/L	68	2.1	SW846 8270C SIM
2-Methylnaphthalene	ND	75.2	51.0	ng/L	68		SW846 8270C SIM
	ND	76.2	47.4	ng/L	62	7.3	SW846 8270C SIM
1-Methylnaphthalene	1.4	75.2	55.1	ng/L	71		SW846 8270C SIM
	1.4	76.2	52.2	ng/L	67	5.5	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9C130273 **Work Order #...:** K8HXX1AD-MS **Matrix.....:** WG
MS Lot-Sample #: D9C130273-001 K8HXX1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Naphthalene	**3.1**	**75.2**	**54.2**	**ng/L**	**68**		**SW846 8270C SIM**
	3.1	**76.2**	**51.8**	**ng/L**	**64**	**4.5**	**SW846 8270C SIM**
Perylene	**ND**	**75.2**	**9.27**	**ng/L**	**12 a**		**SW846 8270C SIM**
	ND	**76.2**	**7.18**	**ng/L**	**9.4 a**	**25**	**SW846 8270C SIM**
Phenanthrene	**4.2**	**75.2**	**58.5**	**ng/L**	**72**		**SW846 8270C SIM**
	4.2	**76.2**	**55.3**	**ng/L**	**67**	**5.6**	**SW846 8270C SIM**
Pyrene	**2.7**	**75.2**	**56.0**	**ng/L**	**71**		**SW846 8270C SIM**
	2.7	**76.2**	**51.7**	**ng/L**	**64**	**8.1**	**SW846 8270C SIM**
Quinoline	**ND**	**75.2**	**61.9**	**ng/L**	**82**		**SW846 8270C SIM**
	ND	**76.2**	**53.8**	**ng/L**	**71**	**14**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	33	(28 - 101)
	23 *	(28 - 101)
Fluorene d-10	69	(23 - 84)
	67	(23 - 84)
Naphthalene-d8	60	(22 - 97)
	56	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Chain of Custody Record

3.0 °C
1.5
3.4
1.6
2.5
1.9

AF
3/13/09
1241

SEVERN TRENT SERVICES **Severn Trent Laboratories, Inc.**

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	3/12/09	150794
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 2**
3752 Wooddale Ave	952-924-2557		

City	State	Zip Code	Site Contact	Lab Contact
St. Louis Park	MN	55416		~~Mike~~ LISA U.

Project Name and Location (State)	Carrier/Waybill Number
Relly MN	

Contract/Purchase Order/Quote No.: 01620-037-400

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPL 5	PAH PPB	Special Instructions/ Conditions of Receipt
SLP6-031209	3/12/09	1130		X			6						X		
SLP6D-031209		1135													
SLP6FB-031209		1120													
SLP6FBD-031209		1125													
SLP6MS-031209		1140													Matrix Spike
SLP6MSD-031209		1145													Matrix Spike Dup
W420-031209		1350					2							X	
W420D-031209		1355													
W420FB-031209		1340													
W420FBD-031209		1345													
W420MS-031209		1400													Matrix Spike
W420MSD-031209		1405													Matrix Spike Dup

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
	3/12/09 ~~1600~~	1600	Shena Rendall	3/12/09	0930
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	3/12/09	150789
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 2**
3752 Wooddale Ave.	952-924-2557		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly MN			
Contract/Purchase Order/Quote No.			
01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPT 5	PAH PPT 75	Special Instructions/ Conditions of Receipt
SLP4T-031209	3/11/09	1020		X			6						X		
SLP10T-031209	3/12/09	0940		↓			↓						X		
W105-031209	3/12/09	1400		↓			↓							X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3/12/09	1600	1. Received By	3/12/09	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9C130273 Date/Time Received: 3/13/09 0900

Company Name & Sampling Site: City of St Louis Park

PM to Complete This Section: *Yes* ☐ *No* ☒ Residual chlorine check required: ☐

Quarantined: *Yes* ☐ *No* ☒

Quote #: 34743 *Analytical = 3/25 *Report = 3/25

Special Instructions:

* Return coolers Priority Overnight to address attached *

- ppt PAHs use Protocol B
- ppb PAHs use Protocol C
- Log "FBD" test code for samples w/ "FBD" in sample ID

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s):								
Temperatures (°C):	3.0	1.5	3.4	1.6	2.5	1.9		

N/A	*Yes*	*No*		*Initials*
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	SL
	☑	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:	
	☑	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☒	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☑	5. Multiphasic samples obvious? If yes, document on CUR.	
	☑	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☑	☐	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☒	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☒	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☒	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☒	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☒	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☒	☐	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☒	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☑	17. Are analyses with short holding times requested?	
	☐	☑	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # DQC1302-73

Login Checks:

N/A	Yes	No		Initials
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
☐	☑	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed?	
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

				Initials
☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	
	☑	☐	29. Were sample labels double-checked by a second person?	
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☑	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☑	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

AECOM

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Memorandum

Date: February 26, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPT/PPB PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9C130273
Appendix A

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of five aqueous samples and six field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C SIM and part per billion (ppb) PAH by 8270C. The samples were collected on March 11-12, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9C130273.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W420-031209	W105-0312-09
W420D-031209	SLP6-031209
W420FB-031209	SLP6D-031209
W420FBD-031209	SLP6FB-031209
SLP4T-031109	SLP6FBD-031209

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Sample IDs	Sample IDs
SLP10T-031209	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C, with the exception of three cooler temperatures measured at 1.5°C, 1.6°C, and 1.9°C. No action was taken.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blank 9076126. Naphthalene and phenanthrene were detected in method blank 9074014 at low concentrations (less than 5x the reporting limit). Method blank 9086161 had 15 compounds detected, 10 of which were at concentrations below the reporting limits. The other five compounds, 2,3-Dihydroindene, Fluoranthene, Pyrene, Napthalene, and Crysene were detected at concentrations exceeding the reporting limits. No corrective action was necessary, as the concentrations in the blanks were less than 5x the reporting limits or the parent sample did not have any detections of the compound.

Field blanks SLP6FB-031209 and SLP6FBD-031209 had concentrations of Naphthalene at levels below the reporting limit. As none of the detected concentrations exceeded the ALs, no action was taken.

Surrogate Spike Recoveries

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The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses with the exception of two samples. The surrogate percent recovery outside (below) the acceptance criteria was chrysene-d12 in both cases. No action was required since the remaining two base/neutral surrogates were within QC recovery limits in each case.

MS/MSD Results

MS/MSD analyses were performed on samples W420-031209 and SLP6-031209. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
2,3-Dihydroindene (MS)	0		30-150		J	UJ
2,3-Dihydroindene (MSD)	22		30-150		J	UJ
Naphthalene (MS)	0		30-150		J	UJ
Naphthalene (MSD)	5.9		30-150		J	UJ
Associated sample: W420-031209						
Compound	**MS/MSD**		**QC Limits**		**Actions**	
	%R	**RPD**	**%R**	**RPD**	**Detects**	**Nondetects**
Acridine (MSD)	29	96	30-150	0-50	J	UJ
Benzo(a)anthracene (MSD)	24		30-150		J	UJ
Benzo(b)fluoranthene (MS)	14		30-150		J	UJ
Benzo(b)fluoranthene (MSD)	11		30-150		J	UJ
Benzo(k)fluoranthene (MS)	14		30-150		J	UJ
Benzo(k)fluoranthene (MSD)	13		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MS)	6.2		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MSD)	4.1		30-150		J	UJ
Dibenz (a,h) acridine (MS)	9.9		30-150		J	UJ
Dibenz (a,h) acridine (MSD)	7.7		30-150		J	UJ
Dibenz (a, j) acridine (MS)	12		30-150		J	UJ
Dibenz (a, j) acridine (MSD)	6.4	56	30-150	0-50	J	UJ
Benzo(ghi)perylene (MS)	6.5		30-150		J	UJ
Benzo(ghi)perylene (MSD)	5.8		30-150		J	UJ
Dibenzo (a, e) pyrene	4.4		30-150		J	UJ

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(MS)						
Dibenzo (a, e) pyrene (MSD)	3.9		30-150		J	UJ
Dibenzo (a, i) pyrene (MS)	3.1		30-150		J	UJ
Dibenzo (a, i) pyrene (MSD)	3.7		30-150		J	UJ
Dibenzo (a, h) pyrene (MS)	2.7		30-150		J	UJ
Dibenzo (a, h) pyrene (MSD)	2.1		30-150		J	UJ
Dibenzo (a, l) pyrene (MS)	15		30-150		J	UJ
Dibenzo (a, l) pyrene (MSD)	12		30-150		J	UJ
Benzo(a)pyrene (MS)	12		30-150		J	UJ
Benzo(a)pyrene (MSD)	9.6		30-150		J	UJ
Benzo(e)pyrene (MS)	12		30-150		J	UJ
Benzo(e)pyrene (MSD)	8.8		30-150		J	UJ
3-Methylcholanthrene (MS)	14		30-150		J	UJ
3-Methylcholanthrene (MSD)	10		30-150		J	UJ
6-Methylchrysene (MS)	26		30-150		J	UJ
6-Methylchrysene (MSD)	20		30-150		J	UJ
Dibenzo(a,h)anthracene (MS)	4.9		30-150		J	UJ
Dibenzo(a,h)anthracene (MSD)	4.6		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MS)	6.5		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MSD)	5.3		30-150		J	UJ
Perylene (MS)	12		30-150		J	UJ
Perylene (MSD)	9.4		30-150		J	UJ
Associated sample: SLP6-031209						

LCS Results

The following table summarizes the %Rs that fell below the QC acceptance criteria for the LCS analysis.

Compound	%R (RPD)	QC Limits (RPD Limits)	Actions	
			Detects	Nondetects
Acridine	0	30-150	J	UJ
Dibenz (a, j) acridine	18	30-150	J	UJ
Quinoline	25	30-150	J	UJ
Associated samples: SLP6-031209				

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Field Duplicate Results

Samples W420-031209/W420D-031209 and SLP6-031209/SLP6-031209D were the field duplicate pairs analyzed with this data set.

A total of 17 of 31 and 14 of 31 compounds were detected. The results for the detected compounds with RPDs outside the acceptance criteria are tabulated below. The remaining RPDs were within the acceptance criteria.

Compound	W420-031209 (µg/L)	W420D-031209 (µg/L)	RPD
Naphthalene	1100	580	61.9
Criteria: Aqueous RPD ≤ 30, if both sample and duplicate results are ≥ 5x sample quantitation limit (SQL). The RPD criterion is doubled if both sample and duplicate results are <5x SQL.			

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W420-031209 and W420D-031209 were initially analyzed undiluted. The results of some compounds fell outside the calibration range. The samples were then diluted at 2x, 4x, and 10x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9E050285

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

May 18, 2009

CASE NARRATIVE
D9E050285

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Ten samples plus one set of MS/MSD samples were received under chain of custody on May 5, 2009. The samples were received at temperatures of 3.5°C, 2.4°C, 5.3°C, 4.8°C, 4.0°C and 0.7°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Samples W410-050409 and W23-050409 were analyzed at three different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for those analyses performed at a 4x or greater dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

Sample W23DUP-050409 was analyzed at two different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analysis performed at a 10x dilution, because the extract was diluted beyond the ability to quantitate recoveries.

Surrogate Chrysene-d12 was recovered below the lower control limit in samples W23DUP-050409, W33R-050409, SLP4T-050409 and SLP15T-050409. The samples were reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

The LCS associated with QC batch 9127226 exhibited recoveries below the lower control limits for the following compounds:

Dibenz(a,j)acridine at 8.8% (limits 30-150%)
Dibenzo(a,i)pyrene at 24% (limits 30-150%)
Dibenzo(a,l)pyrene at 25% (limits 30-150%)
Indole at 29% (30-150%)
Dibenzo(a,e)pyrene at 29% (limits 30-150%)
Dibenzo(a,h)pyrene at 13% (limits 30-150%)
3-Methylcholanthrene at 27% (limits 30-150%)

Analytes Dibenz(a,j)acridine, Dibenzo(a,e)pyrene, Dibenzo(a,i)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,l)pyrene and 3-Methylcholanthrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

The MS/MSD associated with QC batch 9127226 was performed using sample W24-050409, as requested. MS/MSD exhibited 16 of the 44 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 17 of the 44 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited 2 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

Benzo(b)fluoranthene	Benzo(k)fluoranthene	7H-Dibenzo[c,g]carbazole
Dibenz(a,h)acridine	Dibenz(a,j)acridine	Benzo(ghi)perylene
Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene	Dibenzo(a,h)pyrene
Dibenzo(a,l),pyrene	Benzo(a)pyrene	Benzo(e)pyrene
3-Methylcholanthrene	6-Methylchrysene	Dibenzo(a,h)anthracene
Indeno(1,2,3-cd)pyrene	Perylene	

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9E050285
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	62
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	25
Sample Surrogates	30	26
Samples and QC Internal Standard Area	42	42
TOTAL	**236**	**224**
% Completeness	**94.9%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9E050285					
Sample: W23-050409		**DUP: W23DUP-050409**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	2900	Acenaphthene	1800	46.8	
Acenaphthylene	140	Acenaphthylene	88	45.6	
Acridine	220	Acridine	140	44.4	
Anthracene	200	Anthracene	120	50.0	
Benzo(a)anthracene	180	Benzo(a)anthracene	93	63.7	p
Benzo(b)fluoranthene	20	Benzo(b)fluoranthene	12	50.0	
Benzo(k)fluoranthene	13	Benzo(k)fluoranthene	ND	NC	
2,3-Benzofuran	1.8	2,3-Benzofuran	1.2	40.0	
Benzo(ghi)perylene	3.0	Benzo(ghi)perylene	ND	NC	
Benzo(a)pyrene	16	Benzo(a)pyrene	5.3	100.5	p
Benzo(e)pyrene	9.8	Benzo(e)pyrene	3.9	86.1	p
Benzo(b)thiophene	71	Benzo(b)thiophene	48	38.7	
Biphenyl	440	Biphenyl	280	44.4	
Carbazole	170	Carbazole	110	42.9	
Chrysene	110	Chrysene	53	69.9	p
Dibenz(a,h)anthracene	1.6	Dibenz(a,h)anthracene	ND	NC	
Dibenzofuran	870	Dibenzofuran	560	43.4	
Dibenzothiophene	270	Dibenzothiophene	170	45.5	
2,3-Dihydroindene	330	2,3-Dihydroindene	220	40.0	
Fluoranthene	1200	Fluoranthene	680	55.3	p
Fluorene	1700	Fluorene	1100	42.9	
Indene	44	Indene	29	41.1	
Indeno(1,2,3-cd)pyrene	2.7	Indeno(1,2,3-cd)pyrene	ND	NC	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	610	2-Methylnaphthalene	390	44.0	
1-Methylnaphthalene	1100	1-Methylnaphthalene	690	45.8	
Naphthalene	1900	Naphthalene	1200	45.2	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	980	Phenanthrene	620	45.0	
Pyrene	1200	Pyrene	670	56.7	p
Quinoline	19	Quinoline	12	45.2	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9E050285

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W410-050409 05/04/09 10:00 001				
Acenaphthene	3800.	110	ng/L	SW846 8270C SIM
Acenaphthylene	310	24	ng/L	SW846 8270C SIM
Acridine	57	6.5	ng/L	SW846 8270C SIM
Anthracene	110	4.2	ng/L	SW846 8270C SIM
2,3-Benzofuran	22	5.4	ng/L	SW846 8270C SIM
Benzo(b)thiophene	3000	100	ng/L	SW846 8270C SIM
Biphenyl	960	28	ng/L	SW846 8270C SIM
Carbazole	1800	19	ng/L	SW846 8270C SIM
Dibenzofuran	250	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	110	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	6100	100	ng/L	SW846 8270C SIM
Fluoranthene	95	4.6	ng/L	SW846 8270C SIM
Fluorene	1400	20	ng/L	SW846 8270C SIM
Indene	5800	94	ng/L	SW846 8270C SIM
2-Methylnaphthalene	5.8 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	5900	110	ng/L	SW846 8270C SIM
Naphthalene	1400	43	ng/L	SW846 8270C SIM
Phenanthrene	1500	32	ng/L	SW846 8270C SIM
Pyrene	45	4.2	ng/L	SW846 8270C SIM
Quinoline	53	9.0	ng/L	SW846 8270C SIM
W23-050409 05/04/09 10:25 002				
Acenaphthene	2900	57	ng/L	SW846 8270C SIM
Acenaphthylene	140	4.8	ng/L	SW846 8270C SIM
Acridine	220	6.5	ng/L	SW846 8270C SIM
Anthracene	200	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	180	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	20	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	13	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	1.8 J	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	3.0 J	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	16	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	9.8	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	71	5.2	ng/L	SW846 8270C SIM
Biphenyl	440	22	ng/L	SW846 8270C SIM
Carbazole	170	3.8	ng/L	SW846 8270C SIM
Chrysene	110	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	1.6 J	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	870	23	ng/L	SW846 8270C SIM
Dibenzothiophene	270	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	330	5.0	ng/L	SW846 8270C SIM
Fluoranthene	1200	18	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E050285

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W23-050409 05/04/09 10:25 002				
Fluorene	1700	41	ng/L	SW846 8270C SIM
Indene	44	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	2.7 J	5.4	ng/L	SW846 8270C SIM
2-Methylnaphthalene	610	24	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1100	22	ng/L	SW846 8270C SIM
Naphthalene	1900	86	ng/L	SW846 8270C SIM
Phenanthrene	980	25	ng/L	SW846 8270C SIM
Pyrene	1200	17	ng/L	SW846 8270C SIM
Quinoline	19	9.0	ng/L	SW846 8270C SIM
W23FB-050409 05/04/09 10:35 003				
Naphthalene	1.5 J	8.6	ng/L	SW846 8270C SIM
W23FBD-050409 05/04/09 10:40 004				
Naphthalene	1.7 J	8.6	ng/L	SW846 8270C SIM
W23DUP-050409 05/04/09 10:30 005				
Acenaphthene	1800	57	ng/L	SW846 8270C SIM
Acenaphthylene	88	4.8	ng/L	SW846 8270C SIM
Acridine	140	6.5	ng/L	SW846 8270C SIM
Anthracene	120	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	93	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	12	4.7	ng/L	SW846 8270C SIM
2,3-Benzofuran	1.2 J	5.4	ng/L	SW846 8270C SIM
Benzo(a)pyrene	5.3	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	3.9 J	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	48	5.2	ng/L	SW846 8270C SIM
Biphenyl	280	5.6	ng/L	SW846 8270C SIM
Carbazole	110	3.8	ng/L	SW846 8270C SIM
Chrysene	53	5.6	ng/L	SW846 8270C SIM
Dibenzofuran	560	57	ng/L	SW846 8270C SIM
Dibenzothiophene	170	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	220	5.0	ng/L	SW846 8270C SIM
Fluoranthene	680	46	ng/L	SW846 8270C SIM
Fluorene	1100	41	ng/L	SW846 8270C SIM
Indene	29	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	390	59	ng/L	SW846 8270C SIM
1-Methylnaphthalene	690	56	ng/L	SW846 8270C SIM
Naphthalene	1200	86	ng/L	SW846 8270C SIM
Phenanthrene	620	63	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E050285

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W23DUP-050409 05/04/09 10:30 005				
Pyrene	670	42	ng/L	SW846 8270C SIM
Quinoline	12	9.0	ng/L	SW846 8270C SIM
W33R-050409 05/04/09 12:15 006				
Acenaphthene	160	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	2.4 J	4.8	ng/L	SW846 8270C SIM
Acridine	10	6.5	ng/L	SW846 8270C SIM
Anthracene	27	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	15	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	6.9	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	2.5 J	4.1	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	2.5 J	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	4.7	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	3.4 J	4.3	ng/L	SW846 8270C SIM
Biphenyl	2.4 J	5.6	ng/L	SW846 8270C SIM
Carbazole	5.9	3.8	ng/L	SW846 8270C SIM
Chrysene	11	5.6	ng/L	SW846 8270C SIM
Dibenzofuran	28	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	11	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	2.8 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	220	4.6	ng/L	SW846 8270C SIM
Fluorene	90	4.1	ng/L	SW846 8270C SIM
Indene	4.4 J	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	2.4 J	5.4	ng/L	SW846 8270C SIM
Indole	13	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	5.1 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	9.5	5.6	ng/L	SW846 8270C SIM
Naphthalene	5.6 J	8.6	ng/L	SW846 8270C SIM
Phenanthrene	62	6.3	ng/L	SW846 8270C SIM
Pyrene	220	4.2	ng/L	SW846 8270C SIM
W24-050409 05/04/09 14:05 008				
Acenaphthene	2.3 J	5.7	ng/L	SW846 8270C SIM
Acridine	7.3	6.5	ng/L	SW846 8270C SIM
Anthracene	5.0	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	0.80 J	5.2	ng/L	SW846 8270C SIM
Carbazole	1.5 J	3.8	ng/L	SW846 8270C SIM
2,3-Dihydroindene	4.6 J	5.0	ng/L	SW846 8270C SIM
Naphthalene	1.7 J	8.6	ng/L	SW846 8270C SIM
Pyrene	2.6 J	4.2	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E050285

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP15-050409 05/04/09 14:45 009				
Acenaphthene	130	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	9.4	4.8	ng/L	SW846 8270C SIM
Dibenzothiophene	2.5 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	3.8 J	5.0	ng/L	SW846 8270C SIM
Pyrene	11	4.2	ng/L	SW846 8270C SIM
SLP15T-050409 05/04/09 15:00 010				
Acenaphthene	1.6 J	5.7	ng/L	SW846 8270C SIM
2,3-Dihydroindene	0.76 J	5.0	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9E050285

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9E050285

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C SIM	Rhain Carpenter	000130

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9E050285

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LCDQW	001	W410-050409	05/04/09	10:00
LCDRJ	002	W23-050409	05/04/09	10:25
LCDRK	003	W23FB-050409	05/04/09	10:35
LCDRL	004	W23FBD-050409	05/04/09	10:40
LCDRP	005	W23DUP-050409	05/04/09	10:30
LCDRR	006	W33R-050409	05/04/09	12:15
LCDRV	007	SLP4T-050409	05/04/09	12:25
LCDR0	008	W24-050409	05/04/09	14:05
LCDR2	009	SLP15-050409	05/04/09	14:45
LCDR5	010	SLP15T-050409	05/04/09	15:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W410-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-001 Work Order #...: LCDQW1AA Matrix.....: WG
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/13/09
Prep Batch #...: 9127226 Analysis Time..: 22:57
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acridine	**57**	**6.5**	**ng/L**
Anthracene	**110**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	**22**	**5.4**	**ng/L**
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**250**	**5.7**	**ng/L**
Dibenzothiophene	**110**	**4.1**	**ng/L**
Fluoranthene	**95**	**4.6**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**5.8 J**	**5.9**	**ng/L**
Perylene	ND	3.8	ng/L
Pyrene	**45**	**4.2**	**ng/L**
Quinoline	**53**	**9.0**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	36	(28 - 101)
Fluorene d-10	54	(23 - 84)
Naphthalene-d8	49	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W410-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-001 Work Order #...: LCDQW2AA Matrix.....: WG
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/14/09
Prep Batch #...: 9127226 Analysis Time..: 19:24
Dilution Factor: 5

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	310	24	ng/L
Biphenyl	960	28	ng/L
Carbazole	1800	19	ng/L
Fluorene	1400	20	ng/L
Naphthalene	1400	43	ng/L
Phenanthrene	1500	32	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W410-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-001 Work Order #...: LCDQW3AA Matrix.....: WG
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/14/09
Prep Batch #...: 9127226 Analysis Time..: 20:01
Dilution Factor: 20

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	3800	110	ng/L
Benzo(b)thiophene	3000	100	ng/L
2,3-Dihydroindene	6100	100	ng/L
Indene	5800	94	ng/L
1-Methylnaphthalene	5900	110	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W23-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-002 Work Order #...: LCDRJ1AA Matrix.....: WG
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/13/09
Prep Batch #...: 9127226 Analysis Time..: 23:34
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	140	4.8	ng/L
Acridine	220	6.5	ng/L
Anthracene	200	4.2	ng/L
Benzo(a)anthracene	180	4.3	ng/L
Benzo(b)fluoranthene	20	4.7	ng/L
Benzo(k)fluoranthene	13	4.1	ng/L
2,3-Benzofuran	1.8 J	5.4	ng/L
Benzo(ghi)perylene	3.0 J	6.2	ng/L
Benzo(a)pyrene	16	2.5	ng/L
Benzo(e)pyrene	9.8	4.3	ng/L
Benzo(b)thiophene	71	5.2	ng/L
Carbazole	170	3.8	ng/L
Chrysene	110	5.6	ng/L
Dibenzo(a,h)anthracene	1.6 J	5.9	ng/L
Dibenzothiophene	270	4.1	ng/L
2,3-Dihydroindene	330	5.0	ng/L
Indene	44	4.7	ng/L
Indeno(1,2,3-cd)pyrene	2.7 J	5.4	ng/L
Indole	ND	4.7	ng/L
Perylene	ND	3.8	ng/L
Quinoline	19	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	36	(28 - 101)
Fluorene d-10	50	(23 - 84)
Naphthalene-d8	47	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W23-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-002 Work Order #...: LCDRJ2AA Matrix.....: WG
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/14/09
Prep Batch #...: 9127226 Analysis Time..: 20:38
Dilution Factor: 4

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Biphenyl	440	22	ng/L
Dibenzofuran	870	23	ng/L
Fluoranthene	1200	18	ng/L
2-Methylnaphthalene	610	24	ng/L
1-Methylnaphthalene	1100	22	ng/L
Phenanthrene	980	25	ng/L
Pyrene	1200	17	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W23-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-002	**Work Order #...:** LCDRJ3AA	**Matrix.....:** WG	
Date Sampled...: 05/04/09	**Date Received..:** 05/05/09		
Prep Date.....: 05/07/09	**Analysis Date..:** 05/14/09		
Prep Batch #...: 9127226	**Analysis Time..:** 21:15		
Dilution Factor: 10			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**2900**	**57**	**ng/L**
Fluorene	**1700**	**41**	**ng/L**
Naphthalene	**1900**	**86**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W23FB-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-003 **Work Order #...:** LCDRK1AA **Matrix.....:** WG
Date Sampled...: 05/04/09 **Date Received..:** 05/05/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9127226 **Analysis Time..:** 00:10
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.5 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	62	(28 - 101)
Fluorene d-10	47	(23 - 84)
Naphthalene-d8	53	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W23FBD-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-004 **Work Order #...:** LCDRL1AA **Matrix.....:** WG
Date Sampled...: 05/04/09 **Date Received..:** 05/05/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9127226 **Analysis Time..:** 00:47
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.7 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	67	(28 - 101)
Fluorene d-10	50	(23 - 84)
Naphthalene-d8	53	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W23DUP-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-005	**Work Order #...:** LCDRP1AA	**Matrix.....:** WG	
Date Sampled...: 05/04/09	**Date Received..:** 05/05/09		
Prep Date.....: 05/07/09	**Analysis Date..:** 05/14/09		
Prep Batch #...: 9127226	**Analysis Time..:** 01:23		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	**88**	**4.8**	**ng/L**
Acridine	**140**	**6.5**	**ng/L**
Anthracene	**120**	**4.2**	**ng/L**
Benzo(a)anthracene	**93**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**12**	**4.7**	**ng/L**
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	**1.2 J**	**5.4**	**ng/L**
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	**5.3**	**2.5**	**ng/L**
Benzo(e)pyrene	**3.9 J**	**4.3**	**ng/L**
Benzo(b)thiophene	**48**	**5.2**	**ng/L**
Biphenyl	**280**	**5.6**	**ng/L**
Carbazole	**110**	**3.8**	**ng/L**
Chrysene	**53**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzothiophene	**170**	**4.1**	**ng/L**
2,3-Dihydroindene	**220**	**5.0**	**ng/L**
Indene	**29**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
Perylene	ND	3.8	ng/L
Quinoline	**12**	**9.0**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	23 *	(28 - 101)
Fluorene d-10	33	(23 - 84)
Naphthalene-d8	32	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W23DUP-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-005	**Work Order #...:** LCDRP2AA	**Matrix.....:** WG	
Date Sampled...: 05/04/09	**Date Received..:** 05/05/09		
Prep Date.....: 05/07/09	**Analysis Date..:** 05/14/09		
Prep Batch #...: 9127226	**Analysis Time..:** 21:52		
Dilution Factor: 10			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**1800**	**57**	**ng/L**
Dibenzofuran	**560**	**57**	**ng/L**
Fluoranthene	**680**	**46**	**ng/L**
Fluorene	**1100**	**41**	**ng/L**
2-Methylnaphthalene	**390**	**59**	**ng/L**
1-Methylnaphthalene	**690**	**56**	**ng/L**
Naphthalene	**1200**	**86**	**ng/L**
Phenanthrene	**620**	**63**	**ng/L**
Pyrene	**670**	**42**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W33R-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-006 Work Order #...: LCDRR1AA Matrix.....: WG
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/14/09
Prep Batch #...: 9127226 Analysis Time..: 01:59
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	160	5.7	ng/L
Acenaphthylene	2.4 J	4.8	ng/L
Acridine	10	6.5	ng/L
Anthracene	27	4.2	ng/L
Benzo(a)anthracene	15	4.3	ng/L
Benzo(b)fluoranthene	6.9	4.7	ng/L
Benzo(k)fluoranthene	2.5 J	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	2.5 J	6.2	ng/L
Benzo(a)pyrene	4.7	2.5	ng/L
Benzo(e)pyrene	3.4 J	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	2.4 J	5.6	ng/L
Carbazole	5.9	3.8	ng/L
Chrysene	11	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	28	5.7	ng/L
Dibenzothiophene	11	4.1	ng/L
2,3-Dihydroindene	2.8 J	5.0	ng/L
Fluoranthene	220	4.6	ng/L
Fluorene	90	4.1	ng/L
Indene	4.4 J	4.7	ng/L
Indeno(1,2,3-cd)pyrene	2.4 J	5.4	ng/L
Indole	13	4.7	ng/L
2-Methylnaphthalene	5.1 J	5.9	ng/L
1-Methylnaphthalene	9.5	5.6	ng/L
Naphthalene	5.6 J	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	62	6.3	ng/L
Pyrene	220	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	10 *	(28 - 101)
Fluorene d-10	41	(23 - 84)
Naphthalene-d8	37	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP4T-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-007 **Work Order #...:** LCDRV1AA **Matrix.....:** WG
Date Sampled...: 05/04/09 **Date Received..:** 05/05/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9127226 **Analysis Time..:** 02:35
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	12 *	(28 - 101)
Fluorene d-10	43	(23 - 84)
Naphthalene-d8	45	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

City of Saint Louis Park

Client Sample ID: W24-050409

GC/MS Semivolatiles

Lot-Sample #...:	D9E050285-008	**Work Order #...:**	LCDR01AA	**Matrix.....:**	WG
Date Sampled...:	05/04/09	**Date Received..:**	05/05/09		
Prep Date.....:	05/07/09	**Analysis Date..:**	05/14/09		
Prep Batch #...:	9127226	**Analysis Time..:**	03:11		
Dilution Factor:	1				
		Method.....:	SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**2.3 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	**7.3**	**6.5**	**ng/L**
Anthracene	**5.0**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**0.80 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.5 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**4.6 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.7 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**2.6 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	41	(28 - 101)
Fluorene d-10	50	(23 - 84)
Naphthalene-d8	51	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP15-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-009	**Work Order #...:** LCDR21AA	**Matrix.....:** WG	
Date Sampled...: 05/04/09	**Date Received..:** 05/05/09		
Prep Date.....: 05/07/09	**Analysis Date..:** 05/14/09		
Prep Batch #...: 9127226	**Analysis Time..:** 05:02		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**130**	**5.7**	**ng/L**
Acenaphthylene	**9.4**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**2.5 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**3.8 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**11**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	29	(28 - 101)
Fluorene d-10	45	(23 - 84)
Naphthalene-d8	47	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP15T-050409

GC/MS Semivolatiles

Lot-Sample #...: D9E050285-010 **Work Order #...:** LCDR51AA **Matrix.....:** WG
Date Sampled...: 05/04/09 **Date Received..:** 05/05/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9127226 **Analysis Time..:** 05:39
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**1.6 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**0.76 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	27 *	(28 - 101)
Fluorene d-10	49	(23 - 84)
Naphthalene-d8	54	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9E050285

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9127226	9127136
002	WG	SW846 8270C SIM		9127226	9127136
003	WG	SW846 8270C SIM		9127226	9127136
004	WG	SW846 8270C SIM		9127226	9127136
005	WG	SW846 8270C SIM		9127226	9127136
006	WG	SW846 8270C SIM		9127226	9127136
007	WG	SW846 8270C SIM		9127226	9127136
008	WG	SW846 8270C SIM		9127226	9127136
009	WG	SW846 8270C SIM		9127226	9127136
010	WG	SW846 8270C SIM		9127226	9127136

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 **Work Order #...:** LCHRL1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E070000-226

Prep Date.....: 05/07/09 **Analysis Time..:** 20:29
Analysis Date..: 05/13/09 **Prep Batch #...:** 9127226
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	64	(28 - 101)
Fluorene d-10	47	(23 - 84)
Naphthalene-d8	56	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 Work Order #...: LCHRL1AC Matrix.....: WATER
LCS Lot-Sample#: D9E070000-226
Prep Date.....: 05/07/09 Analysis Date..: 05/13/09
Prep Batch #...: 9127226 Analysis Time..: 21:06
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	48	(30 - 150)	SW846 8270C SIM
Acenaphthylene	36	(30 - 150)	SW846 8270C SIM
Acridine	0.0	(30 - 150)	SW846 8270C SIM
Anthracene	39	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	44	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	49	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	57	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	38	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	38	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	8.8 a	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	46	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	46	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	29 a	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	24 a	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	13 a	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	25 a	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	44	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	30	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	46	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	53	(37 - 105)	SW846 8270C SIM
Benzo(b)thiophene	46	(30 - 150)	SW846 8270C SIM
3-Methylcholanthrene	27 a	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	42	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	40	(30 - 150)	SW846 8270C SIM
Biphenyl	50	(30 - 150)	SW846 8270C SIM
Carbazole	41	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	40	(30 - 150)	SW846 8270C SIM
Chrysene	57	(20 - 136)	SW846 8270C SIM
Dibenzo(a,h)anthracene	45	(30 - 150)	SW846 8270C SIM
Dibenzofuran	52	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	46	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	45	(30 - 150)	SW846 8270C SIM
Fluoranthene	40	(30 - 150)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 **Work Order #...:** LCHRL1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-226

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**44**	**(34 - 96)**	**SW846 8270C SIM**
Indene	**43**	**(22 - 86)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**46**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**29 a**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**47**	**(25 - 95)**	**SW846 8270C SIM**
1-Methylnaphthalene	**47**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**48**	**(27 - 95)**	**SW846 8270C SIM**
Perylene	**51**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**50**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**39**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**24**	**(20 - 112)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	52	(28 - 101)
Fluorene d-10	41	(23 - 84)
Naphthalene-d8	47	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 Work Order #...: LCHRL1AC Matrix.....: WATER
LCS Lot-Sample#: D9E070000-226
Prep Date.....: 05/07/09 Analysis Date..: 05/13/09
Prep Batch #...: 9127226 Analysis Time..: 21:06
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	36.0	ng/L	48	SW846 8270C S
Acenaphthylene	75.0	26.8	ng/L	36	SW846 8270C S
Acridine	75.0		ng/L	0.0	SW846 8270C S
Anthracene	75.0	28.9	ng/L	39	SW846 8270C S
Benzo(a)anthracene	75.0	33.0	ng/L	44	SW846 8270C S
Benzo(b)fluoranthene	75.0	36.7	ng/L	49	SW846 8270C S
Benzo(k)fluoranthene	75.0	42.9	ng/L	57	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	28.3	ng/L	38	SW846 8270C S
Dibenz(a,h)acridine	75.0	28.4	ng/L	38	SW846 8270C S
Dibenz(a,j)acridine	75.0	6.61 a	ng/L	8.8	SW846 8270C S
2,3-Benzofuran	75.0	34.8	ng/L	46	SW846 8270C S
Benzo(ghi)perylene	75.0	34.8	ng/L	46	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	21.6 a	ng/L	29	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	17.7 a	ng/L	24	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	9.38 a	ng/L	13	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	18.6 a	ng/L	25	SW846 8270C S
Benzo(a)pyrene	75.0	33.4	ng/L	44	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	22.6	ng/L	30	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	34.6	ng/L	46	SW846 8270C S
Benzo(e)pyrene	75.0	39.5	ng/L	53	SW846 8270C S
Benzo(b)thiophene	75.0	34.9	ng/L	46	SW846 8270C S
3-Methylcholanthrene	75.0	20.4 a	ng/L	27	SW846 8270C S
6-Methylchrysene	75.0	31.3	ng/L	42	SW846 8270C S
1-Methylphenanthrene	75.0	30.1	ng/L	40	SW846 8270C S
Biphenyl	75.0	37.5	ng/L	50	SW846 8270C S
Carbazole	75.0	31.1	ng/L	41	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	29.8	ng/L	40	SW846 8270C S
Chrysene	75.0	43.0	ng/L	57	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	34.0	ng/L	45	SW846 8270C S
Dibenzofuran	75.0	39.2	ng/L	52	SW846 8270C S
Dibenzothiophene	75.0	34.4	ng/L	46	SW846 8270C S
2,3-Dihydroindene	75.0	33.4	ng/L	45	SW846 8270C S
Fluoranthene	75.0	29.8	ng/L	40	SW846 8270C S

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 **Work Order #...:** LCHRL1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-226

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**75.0**	**32.6**	**ng/L**	**44**	**SW846 8270C S**
Indene	**75.0**	**32.6**	**ng/L**	**43**	**SW846 8270C S**
Indeno(1,2,3-cd)pyrene	**75.0**	**34.2**	**ng/L**	**46**	**SW846 8270C S**
Indole	**75.0**	**21.8 a**	**ng/L**	**29**	**SW846 8270C S**
2-Methylnaphthalene	**75.0**	**35.1**	**ng/L**	**47**	**SW846 8270C S**
1-Methylnaphthalene	**75.0**	**35.5**	**ng/L**	**47**	**SW846 8270C S**
Naphthalene	**75.0**	**35.7**	**ng/L**	**48**	**SW846 8270C S**
Perylene	**75.0**	**38.3**	**ng/L**	**51**	**SW846 8270C S**
Phenanthrene	**75.0**	**37.4**	**ng/L**	**50**	**SW846 8270C S**
Pyrene	**75.0**	**29.0**	**ng/L**	**39**	**SW846 8270C S**
Quinoline	**75.0**	**17.9**	**ng/L**	**24**	**SW846 8270C S**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	52	(28 - 101)
Fluorene d-10	41	(23 - 84)
Naphthalene-d8	47	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 Work Order #...: LCDR01AC-MS Matrix.....: WG
MS Lot-Sample #: D9E050285-008 LCDR01AD-MSD
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/14/09
Prep Batch #...: 9127226 Analysis Time..: 03:48
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	54	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	9.8	(0-50)	SW846 8270C SIM
Acenaphthylene	59	(30 - 150)			SW846 8270C SIM
	63	(30 - 150)	10	(0-50)	SW846 8270C SIM
Acridine	74	(30 - 150)			SW846 8270C SIM
	78	(30 - 150)	7.2	(0-50)	SW846 8270C SIM
Anthracene	67	(30 - 150)			SW846 8270C SIM
	72	(30 - 150)	9.4	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	56	(30 - 150)			SW846 8270C SIM
	41	(30 - 150)	26	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	18 a	(30 - 150)			SW846 8270C SIM
	12 a	(30 - 150)	32	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	16 a	(30 - 150)			SW846 8270C SIM
	11 a	(30 - 150)	35	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	15 a	(30 - 150)			SW846 8270C SIM
	8.8 a	(30 - 150)	47	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	21 a	(30 - 150)			SW846 8270C SIM
	13 a	(30 - 150)	47	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	16 a	(30 - 150)			SW846 8270C SIM
	10 a	(30 - 150)	41	(0-50)	SW846 8270C SIM
2,3-Benzofuran	47	(30 - 150)			SW846 8270C SIM
	51	(30 - 150)	12	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	5.8 a	(30 - 150)			SW846 8270C SIM
	4.1 a	(30 - 150)	31	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	2.8 a	(30 - 150)			SW846 8270C SIM
	2.2 a	(30 - 150)	20	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	2.3 a	(30 - 150)			SW846 8270C SIM
	1.6 a	(30 - 150)	31	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	1.5 a	(30 - 150)			SW846 8270C SIM
	0.93 a	(30 - 150)	44	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	18 a	(30 - 150)			SW846 8270C SIM
	9.8 a,p	(30 - 150)	56	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	17 a	(30 - 150)			SW846 8270C SIM
	11 a	(30 - 150)	40	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	66	(30 - 150)			SW846 8270C SIM
	66	(30 - 150)	3.8	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	54	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	8.3	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 **Work Order #...:** LCDR01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E050285-008 LCDR01AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	15 a	(37 - 105)			SW846 8270C SIM
	9.7 a	(37 - 105)	42	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	49	(30 - 150)			SW846 8270C SIM
	54	(30 - 150)	13	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	24 a	(30 - 150)			SW846 8270C SIM
	13 a,p	(30 - 150)	56	(0-50)	SW846 8270C SIM
6-Methylchrysene	39	(30 - 150)			SW846 8270C SIM
	26 a	(30 - 150)	36	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	59	(30 - 150)			SW846 8270C SIM
	61	(30 - 150)	8.0	(0-50)	SW846 8270C SIM
Biphenyl	54	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	11	(0-50)	SW846 8270C SIM
Carbazole	76	(30 - 150)			SW846 8270C SIM
	81	(30 - 150)	9.6	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	47	(30 - 150)			SW846 8270C SIM
	50	(30 - 150)	9.3	(0-50)	SW846 8270C SIM
Chrysene	43	(20 - 136)			SW846 8270C SIM
	33	(20 - 136)	24	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	5.8 a	(30 - 150)			SW846 8270C SIM
	4.6 a	(30 - 150)	20	(0-50)	SW846 8270C SIM
Dibenzofuran	60	(30 - 150)			SW846 8270C SIM
	63	(30 - 150)	9.8	(0-50)	SW846 8270C SIM
Dibenzothiophene	56	(30 - 150)			SW846 8270C SIM
	60	(30 - 150)	9.7	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	44	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	7.5	(0-50)	SW846 8270C SIM
Fluoranthene	62	(30 - 150)			SW846 8270C SIM
	63	(30 - 150)	4.8	(0-50)	SW846 8270C SIM
Fluorene	50	(34 - 96)			SW846 8270C SIM
	54	(34 - 96)	11	(0-50)	SW846 8270C SIM
Indene	49	(22 - 86)			SW846 8270C SIM
	52	(22 - 86)	9.8	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	6.4 a	(30 - 150)			SW846 8270C SIM
	4.8 a	(30 - 150)	25	(0-50)	SW846 8270C SIM
Indole	59	(30 - 150)			SW846 8270C SIM
	65	(30 - 150)	13	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	52	(25 - 95)			SW846 8270C SIM
	55	(25 - 95)	9.5	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	51	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	10	(0-50)	SW846 8270C SIM
Naphthalene	48	(27 - 95)			SW846 8270C SIM
	52	(27 - 95)	11	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 **Work Order #...:** LCDR01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E050285-008 LCDR01AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**14 a**	**(30 - 150)**			**SW846 8270C SIM**
	8.9 a	**(30 - 150)**	**42**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**59**	**(30 - 150)**			**SW846 8270C SIM**
	62	**(30 - 150)**	**8.7**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**59**	**(30 - 150)**			**SW846 8270C SIM**
	59	**(30 - 150)**	**4.2**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**57**	**(20 - 112)**			**SW846 8270C SIM**
	62	**(20 - 112)**	**12**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	43	(28 - 101)
	32	(28 - 101)
Fluorene d-10	48	(23 - 84)
	52	(23 - 84)
Naphthalene-d8	48	(22 - 97)
	54	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 Work Order #...: LCDR01AC-MS Matrix.....: WG
MS Lot-Sample #: D9E050285-008 LCDR01AD-MSD
Date Sampled...: 05/04/09 Date Received..: 05/05/09
Prep Date.....: 05/07/09 Analysis Date..: 05/14/09
Prep Batch #...: 9127226 Analysis Time..: 03:48
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	2.3	77.3	44.3	ng/L	54		SW846 8270C SIM
	2.3	80.0	48.9	ng/L	58	9.8	SW846 8270C SIM
Acenaphthylene	ND	77.3	45.5	ng/L	59		SW846 8270C SIM
	ND	80.0	50.4	ng/L	63	10	SW846 8270C SIM
Acridine	7.3	77.3	64.9	ng/L	74		SW846 8270C SIM
	7.3	80.0	69.7	ng/L	78	7.2	SW846 8270C SIM
Anthracene	5.0	77.3	57.0	ng/L	67		SW846 8270C SIM
	5.0	80.0	62.6	ng/L	72	9.4	SW846 8270C SIM
Benzo(a)anthracene	ND	77.3	43.2	ng/L	56		SW846 8270C SIM
	ND	80.0	33.1	ng/L	41	26	SW846 8270C SIM
Benzo(b)fluoranthene	ND	77.3	13.6	ng/L	18 a		SW846 8270C SIM
	ND	80.0	9.82	ng/L	12 a	32	SW846 8270C SIM
Benzo(k)fluoranthene	ND	77.3	12.6	ng/L	16 a		SW846 8270C SIM
	ND	80.0	8.90	ng/L	11 a	35	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	ND	77.3	11.4	ng/L	15 a		SW846 8270C SIM
	ND	80.0	7.07	ng/L	8.8 a	47	SW846 8270C SIM
Dibenz(a,h)acridine	ND	77.3	16.2	ng/L	21 a		SW846 8270C SIM
	ND	80.0	10.0	ng/L	13 a	47	SW846 8270C SIM
Dibenz(a,j)acridine	ND	77.3	12.7	ng/L	16 a		SW846 8270C SIM
	ND	80.0	8.32	ng/L	10 a	41	SW846 8270C SIM
2,3-Benzofuran	ND	77.3	36.7	ng/L	47		SW846 8270C SIM
	ND	80.0	41.2	ng/L	51	12	SW846 8270C SIM
Benzo(ghi)perylene	ND	77.3	4.51	ng/L	5.8 a		SW846 8270C SIM
	ND	80.0	3.30	ng/L	4.1 a	31	SW846 8270C SIM
Dibenzo(a,e)pyrene	ND	77.3	2.13	ng/L	2.8 a		SW846 8270C SIM
	ND	80.0	1.74	ng/L	2.2 a	20	SW846 8270C SIM
Dibenzo(a,i)pyrene	ND	77.3	1.76	ng/L	2.3 a		SW846 8270C SIM
	ND	80.0	1.28	ng/L	1.6 a	31	SW846 8270C SIM
Dibenzo(a,h)pyrene	ND	77.3	1.16	ng/L	1.5 a		SW846 8270C SIM
	ND	80.0	0.742	ng/L	0.93 a	44	SW846 8270C SIM
Dibenzo(a,l)pyrene	ND	77.3	14.0	ng/L	18 a		SW846 8270C SIM
	ND	80.0	7.84	ng/L	9.8	56	SW846 8270C SIM
	Qualifiers: a,p						
Benzo(a)pyrene	ND	77.3	13.3	ng/L	17 a		SW846 8270C SIM
	ND	80.0	8.89	ng/L	11 a	40	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	ND	77.3	50.7	ng/L	66		SW846 8270C SIM
	ND	80.0	52.6	ng/L	66	3.8	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 **Work Order #...:** LCDR01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E050285-008 LCDR01AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,6-Dimethylnaphthalene	ND	77.3	41.9	ng/L	54		SW846 8270C SIM
	ND	80.0	45.5	ng/L	57	8.3	SW846 8270C SIM
Benzo(e)pyrene	ND	77.3	11.8	ng/L	15 a		SW846 8270C SIM
	ND	80.0	7.74	ng/L	9.7 a	42	SW846 8270C SIM
Benzo(b)thiophene	0.80	77.3	38.4	ng/L	49		SW846 8270C SIM
	0.80	80.0	43.8	ng/L	54	13	SW846 8270C SIM
3-Methylcholanthrene	ND	77.3	18.8	ng/L	24 a		SW846 8270C SIM
	ND	80.0	10.5	ng/L	13 a,p	56	SW846 8270C SIM
6-Methylchrysene	ND	77.3	29.9	ng/L	39		SW846 8270C SIM
	ND	80.0	20.9	ng/L	26 a	36	SW846 8270C SIM
1-Methylphenanthrene	0.76	77.3	46.1	ng/L	59		SW846 8270C SIM
	0.76	80.0	49.9	ng/L	61	8.0	SW846 8270C SIM
Biphenyl	ND	77.3	41.6	ng/L	54		SW846 8270C SIM
	ND	80.0	46.4	ng/L	58	11	SW846 8270C SIM
Carbazole	1.5	77.3	59.9	ng/L	76		SW846 8270C SIM
	1.5	80.0	66.0	ng/L	81	9.6	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	0.40	77.3	36.8	ng/L	47		SW846 8270C SIM
	0.40	80.0	40.3	ng/L	50	9.3	SW846 8270C SIM
Chrysene	ND	77.3	33.4	ng/L	43		SW846 8270C SIM
	ND	80.0	26.2	ng/L	33	24	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	77.3	4.50	ng/L	5.8 a		SW846 8270C SIM
	ND	80.0	3.66	ng/L	4.6 a	20	SW846 8270C SIM
Dibenzofuran	ND	77.3	46.0	ng/L	60		SW846 8270C SIM
	ND	80.0	50.8	ng/L	63	9.8	SW846 8270C SIM
Dibenzothiophene	ND	77.3	43.6	ng/L	56		SW846 8270C SIM
	ND	80.0	48.0	ng/L	60	9.7	SW846 8270C SIM
2,3-Dihydroindene	4.6	77.3	38.6	ng/L	44		SW846 8270C SIM
	4.6	80.0	41.6	ng/L	46	7.5	SW846 8270C SIM
Fluoranthene	ND	77.3	47.9	ng/L	62		SW846 8270C SIM
	ND	80.0	50.3	ng/L	63	4.8	SW846 8270C SIM
Fluorene	ND	77.3	38.8	ng/L	50		SW846 8270C SIM
	ND	80.0	43.1	ng/L	54	11	SW846 8270C SIM
Indene	ND	77.3	37.6	ng/L	49		SW846 8270C SIM
	ND	80.0	41.5	ng/L	52	9.8	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	77.3	4.96	ng/L	6.4 a		SW846 8270C SIM
	ND	80.0	3.84	ng/L	4.8 a	25	SW846 8270C SIM
Indole	ND	77.3	45.7	ng/L	59		SW846 8270C SIM
	ND	80.0	52.0	ng/L	65	13	SW846 8270C SIM
2-Methylnaphthalene	ND	77.3	39.8	ng/L	52		SW846 8270C SIM
	ND	80.0	43.8	ng/L	55	9.5	SW846 8270C SIM
1-Methylnaphthalene	ND	77.3	39.5	ng/L	51		SW846 8270C SIM
	ND	80.0	43.6	ng/L	55	10	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E050285 **Work Order #...:** LCDR01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E050285-008 LCDR01AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Naphthalene	**1.7**	**77.3**	**38.9**	**ng/L**	**48**		**SW846 8270C SIM**
	1.7	**80.0**	**43.5**	**ng/L**	**52**	**11**	**SW846 8270C SIM**
Perylene	**ND**	**77.3**	**10.9**	**ng/L**	**14 a**		**SW846 8270C SIM**
	ND	**80.0**	**7.12**	**ng/L**	**8.9 a**	**42**	**SW846 8270C SIM**
Phenanthrene	**ND**	**77.3**	**45.3**	**ng/L**	**59**		**SW846 8270C SIM**
	ND	**80.0**	**49.4**	**ng/L**	**62**	**8.7**	**SW846 8270C SIM**
Pyrene	**2.6**	**77.3**	**48.0**	**ng/L**	**59**		**SW846 8270C SIM**
	2.6	**80.0**	**50.1**	**ng/L**	**59**	**4.2**	**SW846 8270C SIM**
Quinoline	**ND**	**77.3**	**44.4**	**ng/L**	**57**		**SW846 8270C SIM**
	ND	**80.0**	**50.0**	**ng/L**	**62**	**12**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	43	(28 - 101)
	32	(28 - 101)
Fluorene d-10	48	(23 - 84)
	52	(23 - 84)
Naphthalene-d8	48	(22 - 97)
	54	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

AG 3.5 4.0
IR1 2.4 0.7
5/5/9 5.3
4.8

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
City of St Louis Park	Scott Anderson	05/04/09	150778
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
3752 Wooddale Ave	(952) 924-2557		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St Louis Park / MN / 55416	D. Tavara	Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly (MN)	Fed Ex 8595-2067-9937		
Contract/Purchase Order/Quote No.			
01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPT 5	PAH PPT 75	Special Instructions/ Conditions of Receipt
W410-050409	05/04/09	1000		X			6							X	
W23-050409	05/04/09	1025		X			6							X	
W23FB-050409	05/04/09	1035		X			6							X	
W23FBD-050409	05/04/09	1040		X			6							X	
W23DUP-050409	05/04/09	1030		X			6							X	
W33R-050409	05/04/09	1215		X			6							X	
SLP4T-050409	05/04/09	1225		X			6						X		
W24-050409	05/04/09	1405		X			6							X	
W24MS-050409	05/04/09	1410		X			6							X	Matrix Spik
W24MSD-050409	05/04/09	1415		X			6							X	Matrix Spike Dupl
SLP1S-050409	05/04/09	1445		X			6							X	
SLP1ST-050409	05/04/09	1500		X			6						X		

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature]	05/04/09	1645	[signature]	5/5/09	0915
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

AECOM Environment
FNBB 332 Minnesota Street Suite E1000 St. Paul, MN 55101
T 651.222.0841 F 651.222.8914 www.aecom.com

Memorandum

Date: March 8, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9E050285
Appendix C

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of eight aqueous samples and two field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C SIM. The samples were collected on May 4, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9E050285.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W410-050409	W23-050409
W23D-050409	W23FB-050409
W23FBD-050409	W33R-050409
SLP4T-050409	W24-050409
SLP15-050409	SLP15T-050409

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REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C. One cooler temperature came in at 0.7°C. No action was taken.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blank 9127226. The field blanks W23FB-050409 and W23FBD-050409 had concentrations of naphthalene detected below the reporting limit. As none of the detected concentrations exceeded the ALs, no action was taken.

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses with the exception of four samples. The surrogate percent recovery outside (below) the acceptance criteria was chrysene-d12 in each case. No action was required since the remaining two base/neutral surrogates were within QC recovery limits.

AECOM Environment
FNBB 332 Minnesota Street Suite E1000 St. Paul, MN 55101
T 651.222.0841 F 651.222.8914 www.aecom.com

MS/MSD Results

MS/MSD analyses were performed on sample W24-050409. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
Benzo(b)fluoranthene (MS)	18		30-150		J	UJ
Benzo(b)fluoranthene (MSD)	12		30-150		J	UJ
Benzo(k)fluoranthene (MS)	16		30-150		J	UJ
Benzo(k)fluoranthene (MSD)	11		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MS)	15		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MSD)	8.8		30-150		J	UJ
Dibenz (a,h) acridine (MS)	21		30-150		J	UJ
Dibenz (a,h) acridine (MSD)	13		30-150		J	UJ
Dibenz (a, j) acridine (MS)	16		30-150		J	UJ
Dibenz (a, j) acridine (MSD)	10		30-150		J	UJ
Benzo(ghi)perylene (MS)	5.8		30-150		J	UJ
Benzo(ghi)perylene (MSD)	4.1		30-150		J	UJ
Dibenzo (a, e) pyrene (MS)	2.8		30-150		J	UJ
Dibenzo (a, e) pyrene (MSD)	2.2		30-150		J	UJ
Dibenzo (a, i) pyrene (MS)	2.3		30-150		J	UJ
Dibenzo (a, i) pyrene (MSD)	1.6		30-150		J	UJ
Dibenzo (a, h) pyrene (MS)	1.5		30-150		J	UJ
Dibenzo (a, h) pyrene (MSD)	0.93		30-150		J	UJ
Dibenzo (a, l) pyrene (MS)	18		30-150		J	UJ
Dibenzo (a, l) pyrene (MSD)	9.8	56	30-150	0-50	J	UJ
Benzo(a)pyrene (MS)	17		30-150		J	UJ

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Benzo(a)pyrene (MSD)	11		30-150		J	UJ
Benzo(e)pyrene (MS)	15		30-150		J	UJ
Benzo(e)pyrene (MSD)	9.7		30-150		J	UJ
3-Methylcholanthrene (MS)	24		30-150		J	UJ
3-Methylcholanthrene (MSD)	13	56	30-150	0-50	J	UJ
6-Methylchrysene (MSD)	26		30-150		J	UJ
Dibenzo(a,h)anthracene (MS)	5.8		30-150		J	UJ
Dibenzo(a,h)anthracene (MSD)	4.6		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MS)	6.4		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MSD)	4.8		30-150		J	UJ
Perylene (MS)	14		30-150		J	UJ
Perylene (MSD)	8.9		30-150		J	UJ
Associated sample: W24-050409						

LCS Results

The following table summarizes the %Rs that fell below the QC acceptance criteria for the LCS analysis.

Compound	%R (RPD)	QC Limits (RPD Limits)	Actions	
			Detects	Nondetects
Acridine	0.0	30-150	J	UJ
Dibenz (a,j) acridine	8.8	30-150	J	UJ
Dibenzo (a,e) pyrene	29	30-150	J	UJ
Dibenzo (a,i) pyrene	24	30-150	J	UJ
Dibenzo (a,h) pyrene	13	30-150	J	UJ
Dibenzo (a,l) pyrene	25	30-150	J	UJ
3-Methylcholanthrene	27	30-150	J	UJ
Indole	29	30-150	J	UJ
Associated samples: All samples in this data set				

Field Duplicate Results

Samples W23-050409 and W23D-050409 were the field duplicate pairs analyzed with this data set.

A total of 29 of 31 compounds were detected. The results for the detected compounds with RPDs outside the acceptance criteria are tabulated below. The remaining RPDs were within the acceptance criteria.

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Compound	W23-050409 (µg/L)	W23DUP-050409 (µg/L)	RPD
Benzo(a)anthracene	180	93	63.7
Benzo(a)pyrene	16	5.3	100.5
Benzo(e)pyrene	9.8	3.9	86.1
Chrysene	110	53	69.9
Fluoranthene	1200	680	55.3
Pyrene	1200	670	56.7
Criteria: Aqueous RPD ≤ 50, if both sample and duplicate results are ≥ 5x sample quantitation limit (SQL). The RPD criterion is doubled if both sample and duplicate results are <5x SQL.			

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W410-050409, W23-050409, and W23DUP-050409 were initially analyzed undiluted. The results of some compounds fell outside the calibration range. The samples were then diluted at 4x, 5x, 10x, or 20x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9E060326

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

May 26, 2009

CASE NARRATIVE
D9E060326

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Thirteen samples plus one set of MS/MSD samples were received under chain of custody on May 6, 2009. The samples were received at temperatures of 2.7°C, 2.8°C and 3.3°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

Sample W420-050509 was analyzed at three different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for those analyses performed at a 4x or greater dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

Sample W439-050509 was analyzed at two different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analysis performed at a 20x dilution, because the extract was diluted beyond the ability to quantitate recoveries.

The MS/MSD associated with QC batch 9127212 was performed using sample W420-050509, as requested. MS/MSD exhibited 6 of the 44 Matrix Spike and Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports. The laboratory noted that Benzo(b)thiophene and 2,3-Dihydroindene are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

Acenaphthene	Benzo(b)thiophene	2,3-Dihydroindene
2-Methylnaphthalene	1-Methylnapthalene	Naphthalene

No other anomalies were noted.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9E060326
ANALYSIS: SW846-8270C

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	14	14
LCS Surrogates	6	6
FB/FBD	62	62
MS	7	5
MS Surrogates	3	3
MSD	7	5
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	39	39
Samples and QC Internal Standard Area	51	51
TOTAL	**264**	**260**
% Completeness	**98.5%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9E060326					
Sample: P309-050509		**DUP: P309DUP-050509**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	11	Acenaphthene	11	0.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	3.3	Carbazole	4.5	30.8	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	ND	2,3-Dihydroindene	ND	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	ND	Naphthalene	ND	0.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9E060326

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W420-050509 05/05/09 08:50 002				
Acenaphthene	130	40	ug/L	SW846 8270C
Anthracene	2.1 J	10	ug/L	SW846 8270C
2,3-Benzofuran	27	10	ug/L	SW846 8270C
Benzo(b)thiophene	78	10	ug/L	SW846 8270C
Biphenyl	16	10	ug/L	SW846 8270C
Carbazole	70	10	ug/L	SW846 8270C
Dibenzofuran	46	10	ug/L	SW846 8270C
Dibenzothiophene	13	10	ug/L	SW846 8270C
2,3-Dihydroindene	230	40	ug/L	SW846 8270C
Fluorene	47	10	ug/L	SW846 8270C
Indene	21	10	ug/L	SW846 8270C
2-Methylnaphthalene	110	10	ug/L	SW846 8270C
1-Methylnaphthalene	140	40	ug/L	SW846 8270C
Naphthalene	2200	400	ug/L	SW846 8270C
Phenanthrene	38	10	ug/L	SW846 8270C
W439-050509 05/05/09 08:35 003				
Acenaphthene	54	10	ug/L	SW846 8270C
2,3-Benzofuran	3.3 J	10	ug/L	SW846 8270C
Benzo(b)thiophene	44	10	ug/L	SW846 8270C
Biphenyl	7.3 J	10	ug/L	SW846 8270C
Carbazole	16	10	ug/L	SW846 8270C
Dibenzofuran	10	10	ug/L	SW846 8270C
Dibenzothiophene	3.8 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	100	10	ug/L	SW846 8270C
Fluorene	9.7 J	10	ug/L	SW846 8270C
Indene	37	10	ug/L	SW846 8270C
2-Methylnaphthalene	31	10	ug/L	SW846 8270C
1-Methylnaphthalene	60	10	ug/L	SW846 8270C
Naphthalene	760	200	ug/L	SW846 8270C
Phenanthrene	8.0 J	10	ug/L	SW846 8270C
P309-050509 05/05/09 17:01 008				
Acenaphthene	11	10	ug/L	SW846 8270C
Carbazole	3.3 J	10	ug/L	SW846 8270C
P309DUP-050509 05/05/09 17:05 009				
Acenaphthene	11	10	ug/L	SW846 8270C
Carbazole	4.5 J	10	ug/L	SW846 8270C

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E060326

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
P310-050509 05/05/09 18:10 012				
Carbazole	1.5 J	10	ug/L	SW846 8270C
P307-050509 05/05/09 18:55 013				
Acenaphthene	12	10	ug/L	SW846 8270C
Carbazole	4.2 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	19	10	ug/L	SW846 8270C
Fluorene	3.2 J	10	ug/L	SW846 8270C
1-Methylnaphthalene	4.9 J	10	ug/L	SW846 8270C

METHODS SUMMARY

D9E060326

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9E060326

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Rhain Carpenter	000130

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9E060326

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LCGL9	001	W117-050509	05/05/09	09:35
LCGMD	002	W420-050509	05/05/09	08:50
LCGMG	003	W439-050509	05/05/09	08:35
LCGMJ	004	P112-050509	05/05/09	11:15
LCGMK	005	P109-050509	05/05/09	13:45
LCGML	006	P308-050509	05/05/09	14:40
LCGMM	007	W427-050509	05/05/09	15:45
LCGMN	008	P309-050509	05/05/09	17:01
LCGMP	009	P309DUP-050509	05/05/09	17:05
LCGMQ	010	P309FB-050509	05/05/09	17:10
LCGMR	011	P309FBD-050509	05/05/09	17:15
LCGMW	012	P310-050509	05/05/09	18:10
LCGM0	013	P307-050509	05/05/09	18:55

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W117-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-001 **Work Order #...:** LCGL91AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 00:54
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	67	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	61	(37 - 107)

City of Saint Louis Park

Client Sample ID: W420-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-002 **Work Order #...:** LCGMD1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 01:28
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	**2.1 J**	**10**	**ug/L**
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	**27**	**10**	**ug/L**
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**78**	**10**	**ug/L**
Biphenyl	**16**	**10**	**ug/L**
Carbazole	**70**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**46**	**10**	**ug/L**
Dibenzothiophene	**13**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**47**	**10**	**ug/L**
Indene	**21**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**110**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**38**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	70	(30 - 160)
Fluorene d-10	69	(36 - 127)
Naphthalene-d8	63	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-002 **Work Order #...:** LCGMD2AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 21:06
Dilution Factor: 4

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**130**	**40**	**ug/L**
2,3-Dihydroindene	**230**	**40**	**ug/L**
1-Methylnaphthalene	**140**	**40**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W420-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-002 **Work Order #...:** LCGMD3AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 21:41
Dilution Factor: 40

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**2200**	**400**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W439-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-003 **Work Order #...:** LCGMG1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 03:12
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**54**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	**3.3 J**	**10**	**ug/L**
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**44**	**10**	**ug/L**
Biphenyl	**7.3 J**	**10**	**ug/L**
Carbazole	**16**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**10**	**10**	**ug/L**
Dibenzothiophene	**3.8 J**	**10**	**ug/L**
2,3-Dihydroindene	**100**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**9.7 J**	**10**	**ug/L**
Indene	**37**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**31**	**10**	**ug/L**
1-Methylnaphthalene	**60**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**8.0 J**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	75	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	67	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W439-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-003	**Work Order #...:** LCGMG2AA	**Matrix.....:** WG	
Date Sampled...: 05/05/09	**Date Received..:** 05/06/09		
Prep Date.....: 05/07/09	**Analysis Date..:** 05/13/09		
Prep Batch #...: 9127212	**Analysis Time..:** 19:57		
Dilution Factor: 20			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**760**	**200**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: P112-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-004 **Work Order #...:** LCGMJ1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 03:47
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	62	(37 - 107)

City of Saint Louis Park

Client Sample ID: P109-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-005 **Work Order #...:** LCGMK1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 04:21
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	64	(30 - 160)
Fluorene d-10	70	(36 - 127)
Naphthalene-d8	71	(37 - 107)

City of Saint Louis Park

Client Sample ID: P308-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-006 **Work Order #...:** LCGML1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 04:56
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	55	(30 - 160)
Fluorene d-10	67	(36 - 127)
Naphthalene-d8	62	(37 - 107)

City of Saint Louis Park

Client Sample ID: W427-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-007 **Work Order #...:** LCGMM1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 05:30
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	67	(30 - 160)
Fluorene d-10	66	(36 - 127)
Naphthalene-d8	68	(37 - 107)

City of Saint Louis Park

Client Sample ID: P309-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-008 **Work Order #...:** LCGMN1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 06:04
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**11**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**3.3 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	53	(30 - 160)
Fluorene d-10	65	(36 - 127)
Naphthalene-d8	54	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: P309DUP-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-009 **Work Order #...:** LCGMP1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 06:38
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**11**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**4.5 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	75	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	54	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: P309FB-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-010 **Work Order #...:** LCGMQ1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 07:13
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	78	(30 - 160)
Fluorene d-10	69	(36 - 127)
Naphthalene-d8	73	(37 - 107)

City of Saint Louis Park

Client Sample ID: P309FBD-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-011 **Work Order #...:** LCGMR1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 07:47
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	72	(36 - 127)
Naphthalene-d8	76	(37 - 107)

City of Saint Louis Park

Client Sample ID: P310-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-012 **Work Order #...:** LCGMW1AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 08:22
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**1.5 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	78	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	56	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: P307-050509

GC/MS Semivolatiles

Lot-Sample #...: D9E060326-013 **Work Order #...:** LCGM01AA **Matrix.....:** WG
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 08:57
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**12**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**4.2 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**19**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**3.2 J**	**10**	**ug/L**
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**4.9 J**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	58	(30 - 160)
Fluorene d-10	66	(36 - 127)
Naphthalene-d8	58	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9E060326

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C		9127212	9127132
002	WG	SW846 8270C		9127212	9127132
003	WG	SW846 8270C		9127212	9127132
004	WG	SW846 8270C		9127212	9127132
005	WG	SW846 8270C		9127212	9127132
006	WG	SW846 8270C		9127212	9127132
007	WG	SW846 8270C		9127212	9127132
008	WG	SW846 8270C		9127212	9127132
009	WG	SW846 8270C		9127212	9127132
010	WG	SW846 8270C		9127212	9127132
011	WG	SW846 8270C		9127212	9127132
012	WG	SW846 8270C		9127212	9127132
013	WG	SW846 8270C		9127212	9127132

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCHQV1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E070000-212

Prep Date.....: 05/07/09 **Analysis Time..:** 22:38
Analysis Date..: 05/12/09 **Prep Batch #...:** 9127212
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	71	(36 - 127)
Naphthalene-d8	75	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCHQV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-212 LCHQV1AD-LCSD
Prep Date.....: 05/07/09 **Analysis Date..:** 05/12/09
Prep Batch #...: 9127212 **Analysis Time..:** 23:12
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	74	(30 - 150)			SW846 8270C
	76	(30 - 150)	3.4	(0-30)	SW846 8270C
Acenaphthylene	76	(30 - 150)			SW846 8270C
	79	(30 - 150)	3.7	(0-30)	SW846 8270C
Acridine	86	(30 - 150)			SW846 8270C
	87	(30 - 150)	1.6	(0-30)	SW846 8270C
Anthracene	84	(30 - 150)			SW846 8270C
	88	(30 - 150)	4.8	(0-30)	SW846 8270C
Benzo(a)anthracene	82	(30 - 150)			SW846 8270C
	87	(30 - 150)	6.2	(0-30)	SW846 8270C
Benzo(b)fluoranthene	77	(30 - 150)			SW846 8270C
	82	(30 - 150)	6.4	(0-30)	SW846 8270C
Benzo(k)fluoranthene	87	(30 - 150)			SW846 8270C
	91	(30 - 150)	5.0	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	79	(30 - 150)			SW846 8270C
	84	(30 - 150)	6.3	(0-30)	SW846 8270C
Dibenz(a,h)acridine	87	(30 - 150)			SW846 8270C
	92	(30 - 150)	6.0	(0-30)	SW846 8270C
Dibenz(a,j)acridine	83	(30 - 150)			SW846 8270C
	90	(30 - 150)	8.1	(0-30)	SW846 8270C
2,3-Benzofuran	65	(30 - 150)			SW846 8270C
	70	(30 - 150)	7.1	(0-30)	SW846 8270C
Benzo(ghi)perylene	83	(30 - 150)			SW846 8270C
	87	(30 - 150)	4.7	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	79	(30 - 150)			SW846 8270C
	85	(30 - 150)	6.8	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	77	(30 - 150)			SW846 8270C
	81	(30 - 150)	6.1	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	69	(30 - 150)			SW846 8270C
	72	(30 - 150)	4.4	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	76	(30 - 150)			SW846 8270C
	80	(30 - 150)	5.6	(0-30)	SW846 8270C
Benzo(a)pyrene	83	(30 - 150)			SW846 8270C
	89	(30 - 150)	6.4	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	58	(30 - 150)			SW846 8270C
	60	(30 - 150)	2.7	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	72	(30 - 150)			SW846 8270C
	75	(30 - 150)	4.4	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCHQV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-212 LCHQV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	86	(30 - 150)			SW846 8270C
	91	(30 - 150)	5.3	(0-30)	SW846 8270C
Benzo(b)thiophene	70	(30 - 150)			SW846 8270C
	74	(30 - 150)	6.1	(0-30)	SW846 8270C
3-Methylcholanthrene	81	(30 - 150)			SW846 8270C
	87	(30 - 150)	7.3	(0-30)	SW846 8270C
6-Methylchrysene	79	(30 - 150)			SW846 8270C
	84	(30 - 150)	5.9	(0-30)	SW846 8270C
1-Methylphenanthrene	82	(30 - 150)			SW846 8270C
	86	(30 - 150)	4.7	(0-30)	SW846 8270C
Biphenyl	73	(30 - 150)			SW846 8270C
	76	(30 - 150)	3.9	(0-30)	SW846 8270C
Carbazole	91	(30 - 150)			SW846 8270C
	95	(30 - 150)	4.4	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalene	78	(30 - 150)			SW846 8270C
	81	(30 - 150)	3.8	(0-30)	SW846 8270C
Chrysene	83	(43 - 124)			SW846 8270C
	87	(43 - 124)	5.0	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	85	(30 - 150)			SW846 8270C
	90	(30 - 150)	5.3	(0-30)	SW846 8270C
Dibenzofuran	79	(30 - 150)			SW846 8270C
	82	(30 - 150)	3.5	(0-30)	SW846 8270C
Dibenzothiophene	85	(30 - 150)			SW846 8270C
	89	(30 - 150)	4.5	(0-30)	SW846 8270C
2,3-Dihydroindene	52	(30 - 150)			SW846 8270C
	58	(30 - 150)	11	(0-30)	SW846 8270C
Fluoranthene	88	(30 - 150)			SW846 8270C
	92	(30 - 150)	5.1	(0-30)	SW846 8270C
Fluorene	78	(51 - 120)			SW846 8270C
	81	(51 - 120)	3.7	(0-30)	SW846 8270C
Indene	61	(49 - 108)			SW846 8270C
	66	(49 - 108)	8.3	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	83	(30 - 150)			SW846 8270C
	88	(30 - 150)	5.4	(0-30)	SW846 8270C
Indole	75	(30 - 150)			SW846 8270C
	78	(30 - 150)	3.4	(0-30)	SW846 8270C
2-Methylnaphthalene	65	(47 - 138)			SW846 8270C
	68	(47 - 138)	4.7	(0-30)	SW846 8270C
1-Methylnaphthalene	66	(30 - 150)			SW846 8270C
	69	(30 - 150)	3.6	(0-30)	SW846 8270C
Naphthalene	67	(43 - 128)			SW846 8270C
	72	(43 - 128)	7.5	(0-30)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCHQV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-212 LCHQV1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**85**	**(30 - 150)**			**SW846 8270C**
	89	**(30 - 150)**	**5.5**	**(0-30)**	**SW846 8270C**
Phenanthrene	**84**	**(30 - 150)**			**SW846 8270C**
	88	**(30 - 150)**	**4.8**	**(0-30)**	**SW846 8270C**
Pyrene	**88**	**(30 - 150)**			**SW846 8270C**
	93	**(30 - 150)**	**5.2**	**(0-30)**	**SW846 8270C**
Quinoline	**76**	**(40 - 126)**			**SW846 8270C**
	78	**(40 - 126)**	**1.8**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	79	(30 - 160)
	81	(30 - 160)
Fluorene d-10	70	(36 - 127)
	72	(36 - 127)
Naphthalene-d8	70	(37 - 107)
	72	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCHQV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-212 LCHQV1AD-LCSD
Prep Date.....: 05/07/09 **Analysis Date..:** 05/12/09
Prep Batch #...: 9127212 **Analysis Time..:** 23:12
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	50.0	37.0	ug/L	74		SW846 8270C
	50.0	38.2	ug/L	76	3.4	SW846 8270C
Acenaphthylene	50.0	37.8	ug/L	76		SW846 8270C
	50.0	39.3	ug/L	79	3.7	SW846 8270C
Acridine	50.0	43.0	ug/L	86		SW846 8270C
	50.0	43.7	ug/L	87	1.6	SW846 8270C
Anthracene	50.0	42.0	ug/L	84		SW846 8270C
	50.0	44.1	ug/L	88	4.8	SW846 8270C
Benzo(a)anthracene	50.0	40.8	ug/L	82		SW846 8270C
	50.0	43.4	ug/L	87	6.2	SW846 8270C
Benzo(b)fluoranthene	50.0	38.6	ug/L	77		SW846 8270C
	50.0	41.1	ug/L	82	6.4	SW846 8270C
Benzo(k)fluoranthene	50.0	43.4	ug/L	87		SW846 8270C
	50.0	45.6	ug/L	91	5.0	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	39.3	ug/L	79		SW846 8270C
	50.0	41.8	ug/L	84	6.3	SW846 8270C
Dibenz(a,h)acridine	50.0	43.5	ug/L	87		SW846 8270C
	50.0	46.1	ug/L	92	6.0	SW846 8270C
Dibenz(a,j)acridine	50.0	41.4	ug/L	83		SW846 8270C
	50.0	44.9	ug/L	90	8.1	SW846 8270C
2,3-Benzofuran	50.0	32.7	ug/L	65		SW846 8270C
	50.0	35.1	ug/L	70	7.1	SW846 8270C
Benzo(ghi)perylene	50.0	41.7	ug/L	83		SW846 8270C
	50.0	43.7	ug/L	87	4.7	SW846 8270C
Dibenzo(a,e)pyrene	50.0	39.5	ug/L	79		SW846 8270C
	50.0	42.3	ug/L	85	6.8	SW846 8270C
Dibenzo(a,i)pyrene	50.0	38.3	ug/L	77		SW846 8270C
	50.0	40.7	ug/L	81	6.1	SW846 8270C
Dibenzo(a,h)pyrene	50.0	34.4	ug/L	69		SW846 8270C
	50.0	36.0	ug/L	72	4.4	SW846 8270C
Dibenzo(a,l)pyrene	50.0	37.8	ug/L	76		SW846 8270C
	50.0	39.9	ug/L	80	5.6	SW846 8270C
Benzo(a)pyrene	50.0	41.6	ug/L	83		SW846 8270C
	50.0	44.3	ug/L	89	6.4	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	29.2	ug/L	58		SW846 8270C
	50.0	30.0	ug/L	60	2.7	SW846 8270C
2,6-Dimethylnaphthalene	50.0	36.0	ug/L	72		SW846 8270C
	50.0	37.6	ug/L	75	4.4	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCHQV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-212 LCHQV1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzo(e)pyrene	50.0	43.0	ug/L	86		SW846 8270C
	50.0	45.4	ug/L	91	5.3	SW846 8270C
Benzo(b)thiophene	50.0	34.9	ug/L	70		SW846 8270C
	50.0	37.2	ug/L	74	6.1	SW846 8270C
3-Methylcholanthrene	50.0	40.4	ug/L	81		SW846 8270C
	50.0	43.5	ug/L	87	7.3	SW846 8270C
6-Methylchrysene	50.0	39.7	ug/L	79		SW846 8270C
	50.0	42.2	ug/L	84	5.9	SW846 8270C
1-Methylphenanthrene	50.0	40.8	ug/L	82		SW846 8270C
	50.0	42.8	ug/L	86	4.7	SW846 8270C
Biphenyl	50.0	36.5	ug/L	73		SW846 8270C
	50.0	38.0	ug/L	76	3.9	SW846 8270C
Carbazole	50.0	45.6	ug/L	91		SW846 8270C
	50.0	47.7	ug/L	95	4.4	SW846 8270C
2,3,5-Trimethylnaphthalene	50.0	38.8	ug/L	78		SW846 8270C
	50.0	40.3	ug/L	81	3.8	SW846 8270C
Chrysene	50.0	41.5	ug/L	83		SW846 8270C
	50.0	43.7	ug/L	87	5.0	SW846 8270C
Dibenzo(a,h)anthracene	50.0	42.5	ug/L	85		SW846 8270C
	50.0	44.9	ug/L	90	5.3	SW846 8270C
Dibenzofuran	50.0	39.6	ug/L	79		SW846 8270C
	50.0	41.1	ug/L	82	3.5	SW846 8270C
Dibenzothiophene	50.0	42.7	ug/L	85		SW846 8270C
	50.0	44.7	ug/L	89	4.5	SW846 8270C
2,3-Dihydroindene	50.0	26.0	ug/L	52		SW846 8270C
	50.0	28.9	ug/L	58	11	SW846 8270C
Fluoranthene	50.0	43.9	ug/L	88		SW846 8270C
	50.0	46.2	ug/L	92	5.1	SW846 8270C
Fluorene	50.0	38.8	ug/L	78		SW846 8270C
	50.0	40.3	ug/L	81	3.7	SW846 8270C
Indene	50.0	30.5	ug/L	61		SW846 8270C
	50.0	33.2	ug/L	66	8.3	SW846 8270C
Indeno(1,2,3-cd)pyrene	50.0	41.7	ug/L	83		SW846 8270C
	50.0	44.0	ug/L	88	5.4	SW846 8270C
Indole	50.0	37.7	ug/L	75		SW846 8270C
	50.0	39.0	ug/L	78	3.4	SW846 8270C
2-Methylnaphthalene	50.0	32.5	ug/L	65		SW846 8270C
	50.0	34.0	ug/L	68	4.7	SW846 8270C
1-Methylnaphthalene	50.0	33.2	ug/L	66		SW846 8270C
	50.0	34.4	ug/L	69	3.6	SW846 8270C
Naphthalene	50.0	33.4	ug/L	67		SW846 8270C
	50.0	36.0	ug/L	72	7.5	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCHQV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E070000-212 LCHQV1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Perylene	**50.0**	**42.3**	**ug/L**	**85**		**SW846 8270C**
	50.0	**44.7**	**ug/L**	**89**	**5.5**	**SW846 8270C**
Phenanthrene	**50.0**	**41.8**	**ug/L**	**84**		**SW846 8270C**
	50.0	**43.9**	**ug/L**	**88**	**4.8**	**SW846 8270C**
Pyrene	**50.0**	**44.1**	**ug/L**	**88**		**SW846 8270C**
	50.0	**46.4**	**ug/L**	**93**	**5.2**	**SW846 8270C**
Quinoline	**50.0**	**38.2**	**ug/L**	**76**		**SW846 8270C**
	50.0	**38.9**	**ug/L**	**78**	**1.8**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	79	(30 - 160)
	81	(30 - 160)
Fluorene d-10	70	(36 - 127)
	72	(36 - 127)
Naphthalene-d8	70	(37 - 107)
	72	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCGMD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E060326-002 LCGMD1AD-MSD
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 02:03
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	281 a	(30 - 150)			SW846 8270C
	279 a	(30 - 150)	0.67	(0-30)	SW846 8270C
Acenaphthylene	82	(30 - 150)			SW846 8270C
	81	(30 - 150)	1.5	(0-30)	SW846 8270C
Acridine	88	(30 - 150)			SW846 8270C
	91	(30 - 150)	4.2	(0-30)	SW846 8270C
Anthracene	84	(30 - 150)			SW846 8270C
	85	(30 - 150)	1.8	(0-30)	SW846 8270C
Benzo(a)anthracene	84	(30 - 150)			SW846 8270C
	88	(30 - 150)	4.6	(0-30)	SW846 8270C
Benzo(b)fluoranthene	76	(30 - 150)			SW846 8270C
	78	(30 - 150)	3.2	(0-30)	SW846 8270C
Benzo(k)fluoranthene	84	(30 - 150)			SW846 8270C
	85	(30 - 150)	2.3	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	79	(30 - 150)			SW846 8270C
	81	(30 - 150)	2.8	(0-30)	SW846 8270C
Dibenz(a,h)acridine	92	(30 - 150)			SW846 8270C
	92	(30 - 150)	0.62	(0-30)	SW846 8270C
Dibenz(a,j)acridine	84	(30 - 150)			SW846 8270C
	84	(30 - 150)	0.45	(0-30)	SW846 8270C
2,3-Benzofuran	73	(30 - 150)			SW846 8270C
	68	(30 - 150)	3.8	(0-30)	SW846 8270C
Benzo(ghi)perylene	81	(30 - 150)			SW846 8270C
	82	(30 - 150)	1.6	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	82	(30 - 150)			SW846 8270C
	86	(30 - 150)	4.9	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	81	(30 - 150)			SW846 8270C
	84	(30 - 150)	4.7	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	68	(30 - 150)			SW846 8270C
	76	(30 - 150)	12	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	81	(30 - 150)			SW846 8270C
	83	(30 - 150)	3.6	(0-30)	SW846 8270C
Benzo(a)pyrene	83	(30 - 150)			SW846 8270C
	86	(30 - 150)	4.3	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	67	(30 - 150)			SW846 8270C
	65	(30 - 150)	2.9	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	77	(30 - 150)			SW846 8270C
	75	(30 - 150)	2.1	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCGMD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E060326-002 LCGMD1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	84	(30 - 150)			SW846 8270C
	86	(30 - 150)	2.3	(0-30)	SW846 8270C
Benzo(b)thiophene	22 a	(30 - 150)			SW846 8270C
	17 a	(30 - 150)	2.6	(0-30)	SW846 8270C
3-Methylcholanthrene	84	(30 - 150)			SW846 8270C
	86	(30 - 150)	3.2	(0-30)	SW846 8270C
6-Methylchrysene	80	(30 - 150)			SW846 8270C
	83	(30 - 150)	3.7	(0-30)	SW846 8270C
1-Methylphenanthrene	81	(30 - 150)			SW846 8270C
	84	(30 - 150)	3.2	(0-30)	SW846 8270C
Biphenyl	76	(30 - 150)			SW846 8270C
	75	(30 - 150)	0.31	(0-30)	SW846 8270C
Carbazole	39	(30 - 150)			SW846 8270C
	38	(30 - 150)	0.40	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	83	(30 - 150)			SW846 8270C
	85	(30 - 150)	2.5	(0-30)	SW846 8270C
Chrysene	80	(43 - 124)			SW846 8270C
	82	(43 - 124)	3.0	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	84	(30 - 150)			SW846 8270C
	86	(30 - 150)	3.0	(0-30)	SW846 8270C
Dibenzofuran	66	(30 - 150)			SW846 8270C
	66	(30 - 150)	0.16	(0-30)	SW846 8270C
Dibenzothiophene	86	(30 - 150)			SW846 8270C
	89	(30 - 150)	2.7	(0-30)	SW846 8270C
2,3-Dihydroindene	262 a	(30 - 150)			SW846 8270C
	255 a	(30 - 150)	2.4	(0-30)	SW846 8270C
Fluoranthene	89	(30 - 150)			SW846 8270C
	92	(30 - 150)	3.2	(0-30)	SW846 8270C
Fluorene	75	(51 - 120)			SW846 8270C
	78	(51 - 120)	1.4	(0-30)	SW846 8270C
Indene	69	(49 - 108)			SW846 8270C
	67	(49 - 108)	1.4	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	82	(30 - 150)			SW846 8270C
	84	(30 - 150)	3.0	(0-30)	SW846 8270C
Indole	61	(30 - 150)			SW846 8270C
	57	(30 - 150)	6.0	(0-30)	SW846 8270C
2-Methylnaphthalene	35 a	(47 - 138)			SW846 8270C
	27 a	(47 - 138)	3.1	(0-30)	SW846 8270C
1-Methylnaphthalene	279 a	(30 - 150)			SW846 8270C
	272 a	(30 - 150)	2.2	(0-30)	SW846 8270C
Naphthalene	421 a	(43 - 128)			SW846 8270C
	404 a	(43 - 128)	3.8	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCGMD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E060326-002 LCGMD1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**81**	**(30 - 150)**			**SW846 8270C**
	84	**(30 - 150)**	**3.6**	**(0-30)**	**SW846 8270C**
Phenanthrene	**69**	**(30 - 150)**			**SW846 8270C**
	68	**(30 - 150)**	**0.21**	**(0-30)**	**SW846 8270C**
Pyrene	**88**	**(30 - 150)**			**SW846 8270C**
	90	**(30 - 150)**	**2.9**	**(0-30)**	**SW846 8270C**
Quinoline	**86**	**(40 - 126)**			**SW846 8270C**
	85	**(40 - 126)**	**1.2**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	66	(30 - 160)
	54	(30 - 160)
Fluorene d-10	72	(36 - 127)
	74	(36 - 127)
Naphthalene-d8	67	(37 - 107)
	63	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCGMD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E060326-002 LCGMD1AD-MSD
Date Sampled...: 05/05/09 **Date Received..:** 05/06/09
Prep Date.....: 05/07/09 **Analysis Date..:** 05/13/09
Prep Batch #...: 9127212 **Analysis Time..:** 02:03
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene		47.3	133	ug/L	281 a		SW846 8270C
		47.3	132	ug/L	279 a	0.67	SW846 8270C
Acenaphthylene	ND	47.3	38.8	ug/L	82		SW846 8270C
	ND	47.3	38.2	ug/L	81	1.5	SW846 8270C
Acridine	ND	47.3	41.5	ug/L	88		SW846 8270C
	ND	47.3	43.3	ug/L	91	4.2	SW846 8270C
Anthracene	2.1	47.3	41.6	ug/L	84		SW846 8270C
	2.1	47.3	42.3	ug/L	85	1.8	SW846 8270C
Benzo(a)anthracene	ND	47.3	39.6	ug/L	84		SW846 8270C
	ND	47.3	41.5	ug/L	88	4.6	SW846 8270C
Benzo(b)fluoranthene	ND	47.3	35.8	ug/L	76		SW846 8270C
	ND	47.3	37.0	ug/L	78	3.2	SW846 8270C
Benzo(k)fluoranthene	ND	47.3	39.5	ug/L	84		SW846 8270C
	ND	47.3	40.4	ug/L	85	2.3	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.3	37.3	ug/L	79		SW846 8270C
	ND	47.3	38.3	ug/L	81	2.8	SW846 8270C
Dibenz(a,h)acridine	ND	47.3	43.4	ug/L	92		SW846 8270C
	ND	47.3	43.6	ug/L	92	0.62	SW846 8270C
Dibenz(a,j)acridine	ND	47.3	39.7	ug/L	84		SW846 8270C
	ND	47.3	39.6	ug/L	84	0.45	SW846 8270C
2,3-Benzofuran	27	47.3	61.4	ug/L	73		SW846 8270C
	27	47.3	59.1	ug/L	68	3.8	SW846 8270C
Benzo(ghi)perylene	ND	47.3	38.4	ug/L	81		SW846 8270C
	ND	47.3	39.1	ug/L	82	1.6	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.3	38.8	ug/L	82		SW846 8270C
	ND	47.3	40.7	ug/L	86	4.9	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.3	38.1	ug/L	81		SW846 8270C
	ND	47.3	40.0	ug/L	84	4.7	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.3	32.0	ug/L	68		SW846 8270C
	ND	47.3	35.9	ug/L	76	12	SW846 8270C
Dibenzo(a,l)pyrene	ND	47.3	38.1	ug/L	81		SW846 8270C
	ND	47.3	39.5	ug/L	83	3.6	SW846 8270C
Benzo(a)pyrene	ND	47.3	39.1	ug/L	83		SW846 8270C
	ND	47.3	40.8	ug/L	86	4.3	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.3	31.8	ug/L	67		SW846 8270C
	ND	47.3	30.9	ug/L	65	2.9	SW846 8270C
2,6-Dimethylnaphthalene	13	47.3	49.0	ug/L	77		SW846 8270C
	13	47.3	48.0	ug/L	75	2.1	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCGMD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E060326-002 LCGMD1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.3	39.8	ug/L	84		SW846 8270C
	ND	47.3	40.7	ug/L	86	2.3	SW846 8270C
Benzo(b)thiophene	78	47.3	88.0	ug/L	22 a		SW846 8270C
	78	47.3	85.7	ug/L	17 a	2.6	SW846 8270C
3-Methylcholanthrene	ND	47.3	39.6	ug/L	84		SW846 8270C
	ND	47.3	40.9	ug/L	86	3.2	SW846 8270C
6-Methylchrysene	ND	47.3	37.8	ug/L	80		SW846 8270C
	ND	47.3	39.3	ug/L	83	3.7	SW846 8270C
1-Methylphenanthrene	ND	47.3	38.3	ug/L	81		SW846 8270C
	ND	47.3	39.6	ug/L	84	3.2	SW846 8270C
Biphenyl	16	47.3	51.3	ug/L	76		SW846 8270C
	16	47.3	51.1	ug/L	75	0.31	SW846 8270C
Carbazole	70	47.3	88.4	ug/L	39		SW846 8270C
	70	47.3	88.0	ug/L	38	0.40	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	47.3	39.4	ug/L	83		SW846 8270C
	ND	47.3	40.4	ug/L	85	2.5	SW846 8270C
Chrysene	ND	47.3	37.7	ug/L	80		SW846 8270C
	ND	47.3	38.9	ug/L	82	3.0	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.3	39.6	ug/L	84		SW846 8270C
	ND	47.3	40.8	ug/L	86	3.0	SW846 8270C
Dibenzofuran	46	47.3	76.8	ug/L	66		SW846 8270C
	46	47.3	76.9	ug/L	66	0.16	SW846 8270C
Dibenzothiophene	13	47.3	53.5	ug/L	86		SW846 8270C
	13	47.3	54.9	ug/L	89	2.7	SW846 8270C
2,3-Dihydroindene		47.3	124	ug/L	262 a		SW846 8270C
		47.3	121	ug/L	255 a	2.4	SW846 8270C
Fluoranthene	ND	47.3	42.1	ug/L	89		SW846 8270C
	ND	47.3	43.4	ug/L	92	3.2	SW846 8270C
Fluorene	47	47.3	83.0	ug/L	75		SW846 8270C
	47	47.3	84.1	ug/L	78	1.4	SW846 8270C
Indene	21	47.3	53.8	ug/L	69		SW846 8270C
	21	47.3	53.1	ug/L	67	1.4	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.3	38.8	ug/L	82		SW846 8270C
	ND	47.3	40.0	ug/L	84	3.0	SW846 8270C
Indole	ND	47.3	28.9	ug/L	61		SW846 8270C
	ND	47.3	27.2	ug/L	57	6.0	SW846 8270C
2-Methylnaphthalene	110	47.3	124	ug/L	35 a		SW846 8270C
	110	47.3	120	ug/L	27 a	3.1	SW846 8270C
1-Methylnaphthalene		47.3	132	ug/L	279 a		SW846 8270C
		47.3	129	ug/L	272 a	2.2	SW846 8270C
Naphthalene		47.3	199	ug/L	421 a		SW846 8270C
		47.3	192	ug/L	404 a	3.8	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E060326 **Work Order #...:** LCGMD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E060326-002 LCGMD1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**47.3**	**38.4**	**ug/L**	**81**		**SW846 8270C**
	ND	**47.3**	**39.8**	**ug/L**	**84**	**3.6**	**SW846 8270C**
Phenanthrene	**38**	**47.3**	**70.0**	**ug/L**	**69**		**SW846 8270C**
	38	**47.3**	**69.8**	**ug/L**	**68**	**0.21**	**SW846 8270C**
Pyrene	**ND**	**47.3**	**41.5**	**ug/L**	**88**		**SW846 8270C**
	ND	**47.3**	**42.7**	**ug/L**	**90**	**2.9**	**SW846 8270C**
Quinoline	**ND**	**47.3**	**40.8**	**ug/L**	**86**		**SW846 8270C**
	ND	**47.3**	**40.2**	**ug/L**	**85**	**1.2**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	66	(30 - 160)
	54	(30 - 160)
Fluorene d-10	72	(36 - 127)
	74	(36 - 127)
Naphthalene-d8	67	(37 - 107)
	63	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

2.7 2.8 3.3
CHK IRZAB
5-6-09

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St Louis Park	Project Manager: Scott Anderson	Date: 5/5/09	Chain of Custody Number: 150795
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 1 of 2
City: St Louis Park / State: MN / Zip Code: 55416	Site Contact: A. Tarara	Lab Contact: Lisa U.	
Project Name and Location (State): Reilly (MN)	Carrier/Waybill Number: Fed Ex/8595 2067 9948		
Contract/Purchase Order/Quote No.: 01620-037-40.0			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPB	Special Instructions/ Conditions of Receipt
W117-050509	05/05/09	0935		X			2						X	PAH PPB
W420-050509		0850												
W420MS-050509		0855												
W420MSD-050509		0900												
W439-050509		0835												
P112-050509		1115												
P109-050509		1345												
P308-050509		1440												
W427-050509		1545												
P309-050509		1701												

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	5/5/09	1930	1. Received By	5/6/9	0945
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St Louis Park	Project Manager: Scott Anderson	Date: 5/5/2009	Chain of Custody Number: 150796
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 2 of 2
City: St Louis Park / State: MN / Zip Code: 55416	Site Contact: A. Tarara	Lab Contact: Lisa L.	
Project Name and Location (State): Reilly (MN)	Carrier/Waybill Number: Fed Ex / 8915 2067 9948		
Contract/Purchase Order/Quote No.: 01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPB	Special Instructions/ Conditions of Receipt
P309DUP-050509	05/05/09	1705		X			2						X	
P309FB-050509	05/05/09	1710		X			2						X	
P309FBD-050509	05/05/09	1715		X			2						X	
P310-050509	05/05/09	1810		X			2						X	
P307-050509	05/05/09	1855		X			2						X	

PAH PPB

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

1. Relinquished By	Date: 5/5/09	Time: 1930	1. Received By	Date: 5/6/9	Time: 0945
2. Relinquished By	Date:	Time:	2. Received By	Date:	Time:
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

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Memorandum

Date: March 1, 2010

To: Bill Gregg

From: Linda Adams/Westford

Subject: Data Validation
PPB PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9E060326
Appendix D

Distribution: R. Kennedy/Westford

60145681 File
SA035pahlms

SUMMARY

Full validation was performed on the data for the analysis of 11 aqueous samples and two field blanks for part per billion (ppb) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C. The samples were collected on May 5, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9E060326.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W117-050509	W420-050509
W439-050509	P112-050509
P109-050509	P308-050509
P309-050509	P309DUP-050509 (Field duplicate of P309-050509)
P309FB-050509 (Field blank)	P309FBD-050509 (Field blank duplicate)
W427-050509	P310-050509

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Sample IDs	Sample IDs
P307-050509	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectrometry (GC/MS) tuning
- Initial and continuing calibrations
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Internal standard performance
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

The target compounds for the samples in this data set are listed on Worksheet #15 of the project specific QAPP. The following discrepancies were noted.

- The laboratory was unable to report the results for benzo(j)fluoranthene since this compound co-elutes with either benzo(k)fluoranthene or benzo(b)fluoranthene. Benzo(b)fluoranthene and benzo(k)fluoranthene were not detected in any samples. Qualification of the data on this basis was not required.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

GC/MS Tuning

The frequency and abundance of the decafluorotriphenylphosphine (DFTPP) tuning results were within the QC acceptance criteria. All samples were analyzed within 12 hours from the DFTPP tuning.

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The method acceptance limits were met regarding the evaluation of DDT, pentachlorophenol, and benzidine degradation and/or tailing.

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs) and the response factors (RFs) of all target compounds in the initial calibration and the percent differences (%Ds) and the RFs in the continuing calibrations associated with all sample analyses were within the QC acceptance criteria with the following exception.

Calibration	Compound	%RSD (IC)	Actions (Detects/Nondetects)
IC 5/12/09	Naphthalene	16.6	J/UJ
Associated samples: All samples in this sample set.			

Laboratory Blanks/Field Blanks

Target compounds were not detected in the laboratory method blank or in the field blank (P309FB-050509) or the field blank duplicate (P309FBD-050509).

Surrogate Spike Recoveries

The surrogate recoveries were within the QC acceptance criteria in all sample analyses with the following exceptions. The surrogates were diluted below the calibration range in the diluted analyses of samples W420-050509 and W439-050509. These samples were initially analyzed undiluted and the surrogate recoveries were within the QC acceptance criteria in the undiluted analyses. Qualification of the data on this basis was not required.

Internal Standard Performance

Internal standard performance met the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on sample W420-050509 from this data set. All target analytes were spiked. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
Acenaphthene	281/279	ok	30-150	30	None*	None*
Benzo(b)thiophene	22/17	ok	30-150	30	J	UJ
2,3-Dihydroindene	262/255	ok	30-150	30	None*	None*
2-Methylnaphthalene	35/27	ok	30-150	30	J	UJ
1-Methylnaphthalene	279/272	ok	30-150	30	None*	None*
Naphthalene	421/404	ok	30-150	30	None*	None*
Associated sample: W420-050509						

*Based on professional judgement, qualification of the data on this basis was not required since the concentration detected in the unspiked sample exceeded 4x the concentration spiked.

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LCS/LCSD Results

All target analytes were spiked. The %Rs and RPDs were within the QC acceptance criteria for the LCS/LCSD analyses.

Field Duplicate Results

Samples P309-050509 and P309DUP-050509 were the field duplicate pair analyzed with this data set. Note that samples P309FB-050509 and P309FBD-050509 are not field samples and should not be considered representative of the sample matrix.

Target analytes were not detected in samples P309-050509 and P309DUP-050509 and P309FB-050509 and P309FBD-050509. The RPDs were therefore not calculable (NC). Precision was deemed acceptable.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted.

The QAPP specified reporting limits were met for all samples.

Samples W420-050509 and W439-050509 were initially analyzed undiluted. The results for several analytes exceeded the calibration range in the initial undiluted analyses of these samples. Sample W420-050509 was reanalyzed at 4x dilution for acenaphthene, 2,3-dihydroindene, and 1-methylnaphthalene and at a 40x dilution for naphthalene. Sample W439-050509 was reanalyzed at a 20x dilution for naphthalene.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within $\pm$ 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this $\pm$ 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

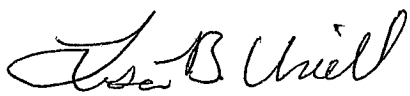
Project: Reilly Tar & Chemical Corporation

Lot #: D9E070283

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.



Lisa B. Uriell
Project Manager

May 27, 2009

CASE NARRATIVE
D9E070283

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Fourteen samples plus one set of MS/MSD samples were received under chain of custody on May 7, 2009. The samples were received at temperatures of 3.7°C, 3.3°C, 3.4°C, 1.3°C, 2.8°C, 3.3°C, 1.8°C and 1.0°C. All sample containers were received in acceptable condition.

One of the 6x1L Ambers received for sample THERMOTECH-050609 was received without a sample ID listed on the label. The container was identified by the sample collection date and time. The client was notified on May 8, 2009.

Several of the sample container labels for sample SLP4-050609 are labeled SLP-050609. The containers were identified as SLP4-050609 by the sample collection date and time. The client was notified on May 8, 2009.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Surrogate Chrysene-d12 was recovered below the lower control limit in samples E2-050609, E13-050609, E15-050609, W29-050609, THERMOTECH-050609, SLP6-050609, W402-050609, SLP4-050609, W403-050609 and W403DUP-050609. The samples were reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

The LCS associated with QC batch 9129037 exhibited recoveries below the lower control limits for the following compounds:

Acridine at 0.0% (limits 30-150%)
Dibenzo(a,i)pyrene at 26% (limits 30-150%)
Dibenzo(a,l)pyrene at 28% (limits 30-150%)
Dibenz(a,j)acridine at 11% (limits 30-150%)
Dibenzo(a,h)pyrene at 2.6% (limits 30-150%)
3-Methylcholanthrene at 15% (limits 30-150%)

Analytes Dibenz(a,j)acridine, Dibenzo(a,i)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,l)pyrene and 3-Methylcholanthrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

The LCS/LCSD associated with QC batch 9131150 exhibited recoveries outside the control limits for the following compounds:

Acridine = LCS at 27% and LCSD at 21% (limits 30-150%)
Dibenzo(a,i)pyrene = LCS at 25% and LCSD at 29% (limits 30-150%)
Dibenzo(a,h)pyrene = LCS at 8.6%, LCSD at 16% (limits 30-150%) and RPD at 60% (limits 0-50%)
Dibenzo(a,l)pyrene = LCS at 27% (limits 30-150%)
3-Methylcholanthrene = LCS at 24% (limits 30-150%)

Analytes Dibenzo(a,i)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,l)pyrene and 3-Methylcholanthrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

The MS/MSD associated with QC batch 9129037 was performed using sample SLP4-050609, as requested. MS/MSD exhibited 18 of the 44 Matrix Spike compound recoveries and one of the three surrogate recoveries outside the control limits. MS/MSD exhibited 17 of the 44 Matrix Spike Duplicate compound recoveries and one of the three surrogate recoveries outside the control limits. The MS/MSD exhibited 1 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

Acridine	Benzo(b)fluoranthene	Benzo(k)fluoranthene
7H-Dibenzo[c,g]carbazole	Dibenz(a,h)acridine	Dibenz(a,j)acridine
Benzo(ghi)perylene	Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene
Dibenzo(a,h)pyrene	Dibenzo(a,l),pyrene	Benzo(a)pyrene
Benzo(e)pyrene	3-Methylcholanthrene	6-Methylchrysene
Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Perylene
Chrysene-d12		

The method required MS/MSD could not be performed for QC re-extraction batch 9131150, due to insufficient sample volume. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines.

Internal standard Perylene-d12 was recovered outside the QC control limits for samples W402-050609, SLP4-050609, SLP4MS-050609 and SLP4MSD-050609. Upon reanalysis, the internal standard outliers were still present, confirming that this anomaly is most likely due to matrix interferences; therefore, corrective action is deemed unnecessary.

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9E070283
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	62	62
MB Surrogates	6	6
LCS	21	21
LCS Surrogates	9	9
FB/FBD	62	62
MS	7	6
MS Surrogates	3	2
MSD	7	6
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	42	32
Samples and QC Internal Standard Area	60	56
TOTAL	**320**	**301**
% Completeness	**94.1%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9E070283					
Sample: W403-050609		DUP: W403DUP-050609			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	3.2	Acenaphthene	2.3	32.7	
Acenaphthylene	11	Acenaphthylene	8.2	29.2	
Acridine	ND	Acridine	7.8	NC	
Anthracene	11	Anthracene	8.1	30.4	
Benzo(a)anthracene	65	Benzo(a)anthracene	42	43.0	
Benzo(b)fluoranthene	97	Benzo(b)fluoranthene	61	45.6	
Benzo(k)fluoranthene	35	Benzo(k)fluoranthene	20	54.5	p
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	53	Benzo(ghi)perylene	33	46.5	
Benzo(a)pyrene	82	Benzo(a)pyrene	50	48.5	
Benzo(e)pyrene	49	Benzo(e)pyrene	31	45.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	1.5	Biphenyl	ND	NC	
Carbazole	6.1	Carbazole	4.8	23.9	
Chrysene	55	Chrysene	35	44.4	
Dibenz(a,h)anthracene	15	Dibenz(a,h)anthracene	9.3	46.9	
Dibenzofuran	2.2	Dibenzofuran	1.6	31.6	
Dibenzothiophene	1.7	Dibenzothiophene	1.3	26.7	
2,3-Dihydroindene	1.0	2,3-Dihydroindene	0.97	3.0	
Fluoranthene	100	Fluoranthene	66	41.0	
Fluorene	3.5	Fluorene	2.6	29.5	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	48	Indeno(1,2,3-cd)pyrene	32	40.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	2.7	2-Methylnaphthalene	2.2	20.4	
1-Methylnaphthalene	2.4	1-Methylnaphthalene	2.0	18.2	
Naphthalene	5.5	Naphthalene	4.8	13.6	
Perylene	15	Perylene	9.3	46.9	
Phenanthrene	28	Phenanthrene	18	43.5	
Pyrene	97	Pyrene	64	41.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9E070283

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
E2-050609 05/06/09 08:20 001				
Acenaphthene	0.85 J	5.7	ng/L	SW846 8270C SIM
Benzo(b)thiophene	1.8 J	5.2	ng/L	SW846 8270C SIM
2,3-Dihydroindene	1.9 J	5.0	ng/L	SW846 8270C SIM
Naphthalene	1.9 J	8.6	ng/L	SW846 8270C SIM
Pyrene	1.4 J	4.2	ng/L	SW846 8270C SIM
E13-050609 05/06/09 08:40 003				
Acenaphthene	130	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	10	4.8	ng/L	SW846 8270C SIM
Dibenzothiophene	3.3 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	9.0	5.0	ng/L	SW846 8270C SIM
Fluoranthene	3.9 J	4.6	ng/L	SW846 8270C SIM
Fluorene	1.0 J	4.1	ng/L	SW846 8270C SIM
Naphthalene	1.6 J	8.6	ng/L	SW846 8270C SIM
Pyrene	9.9	4.2	ng/L	SW846 8270C SIM
E15-050609 05/06/09 08:50 004				
Acenaphthene	5.2 J	5.7	ng/L	SW846 8270C SIM
W29-050609 05/06/09 13:40 005				
Acenaphthene	5.7	5.7	ng/L	SW846 8270C SIM
Anthracene	1.3 J	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	1.2 J	4.3	ng/L	SW846 8270C SIM
2,3-Dihydroindene	1.0 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	7.1	4.6	ng/L	SW846 8270C SIM
Fluorene	2.3 J	4.1	ng/L	SW846 8270C SIM
Pyrene	9.2	4.2	ng/L	SW846 8270C SIM
SLP6-050609 05/06/09 11:00 007				
Acenaphthene	68	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	8.7	4.8	ng/L	SW846 8270C SIM
Anthracene	1.4 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	6.4	5.2	ng/L	SW846 8270C SIM
Carbazole	1.5 J	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	1.3 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	43	5.0	ng/L	SW846 8270C SIM
Fluoranthene	3.9 J	4.6	ng/L	SW846 8270C SIM
Indene	3.9 J	4.7	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.0 J	5.6	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E070283

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP6-050609 05/06/09 11:00 007				
Naphthalene	3.0 J	8.6	ng/L	SW846 8270C SIM
Pyrene	2.2 J	4.2	ng/L	SW846 8270C SIM
W401-050609 05/06/09 09:15 008				
Acenaphthene	25	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.4 J	4.8	ng/L	SW846 8270C SIM
Anthracene	0.83 J	4.2	ng/L	SW846 8270C SIM
Dibenzothiophene	0.99 J	4.1	ng/L	SW846 8270C SIM
Fluoranthene	2.6 J	4.6	ng/L	SW846 8270C SIM
Naphthalene	1.4 J	8.6	ng/L	SW846 8270C SIM
Pyrene	10	4.2	ng/L	SW846 8270C SIM
W402-050609 05/06/09 12:45 009				
Acenaphthene	5.8	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.4 J	4.8	ng/L	SW846 8270C SIM
Acridine	13	6.5	ng/L	SW846 8270C SIM
Anthracene	63	4.2	ng/L	SW846 8270C SIM
Biphenyl	1.9 J	5.6	ng/L	SW846 8270C SIM
Carbazole	2.0 J	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	3.7 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.4 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	2.9 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	3.6 J	4.6	ng/L	SW846 8270C SIM
Fluorene	5.3	4.1	ng/L	SW846 8270C SIM
Indole	3.0 J	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	3.4 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	5.0 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	8.1 J	8.6	ng/L	SW846 8270C SIM
Phenanthrene	6.6	6.3	ng/L	SW846 8270C SIM
Pyrene	19	4.2	ng/L	SW846 8270C SIM
SLP4-050609 05/06/09 16:00 010				
Acenaphthene	54	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	2.3 J	4.8	ng/L	SW846 8270C SIM
Anthracene	1.1 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	3.2 J	5.2	ng/L	SW846 8270C SIM
Carbazole	3.3 J	3.8	ng/L	SW846 8270C SIM
2,3-Dihydroindene	28	5.0	ng/L	SW846 8270C SIM
Indene	5.4	4.7	ng/L	SW846 8270C SIM
Naphthalene	1.8 J	8.6	ng/L	SW846 8270C SIM

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EXECUTIVE SUMMARY - Detection Highlights

D9E070283

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP4-050609 05/06/09 16:00 010				
Pyrene	8.0	4.2	ng/L	SW846 8270C SIM
W403-050609 05/06/09 17:30 011				
Acenaphthene	3.2 J	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	11	4.8	ng/L	SW846 8270C SIM
Anthracene	11	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	65	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	97	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	35	4.1	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	53	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	82	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	49	4.3	ng/L	SW846 8270C SIM
Biphenyl	1.5 J	5.6	ng/L	SW846 8270C SIM
Carbazole	6.1	3.8	ng/L	SW846 8270C SIM
Chrysene	55	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	15	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	2.2 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.7 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	1.0 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	100	4.6	ng/L	SW846 8270C SIM
Fluorene	3.5 J	4.1	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	48	5.4	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.7 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	2.4 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	5.5 J	8.6	ng/L	SW846 8270C SIM
Perylene	15	3.8	ng/L	SW846 8270C SIM
Phenanthrene	28	6.3	ng/L	SW846 8270C SIM
Pyrene	97	4.2	ng/L	SW846 8270C SIM
W403DUP-050609 05/06/09 17:35 012				
Acenaphthene	2.3 J	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	8.2	4.8	ng/L	SW846 8270C SIM
Acridine	7.8	6.5	ng/L	SW846 8270C SIM
Anthracene	8.1	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	42	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	61	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	20	4.1	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	33	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	50	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	31	4.3	ng/L	SW846 8270C SIM
Carbazole	4.8	3.8	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E070283

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W403DUP-050609 05/06/09 17:35 012				
Chrysene	35	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	9.3	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	1.6 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.3 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	0.97 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	66	4.6	ng/L	SW846 8270C SIM
Fluorene	2.6 J	4.1	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	32	5.4	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.2 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	2.0 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	4.8 J	8.6	ng/L	SW846 8270C SIM
Perylene	9.3	3.8	ng/L	SW846 8270C SIM
Phenanthrene	18	6.3	ng/L	SW846 8270C SIM
Pyrene	64	4.2	ng/L	SW846 8270C SIM
W403FB-050609 05/06/09 17:40 013				
Naphthalene	1.9 J	8.6	ng/L	SW846 8270C SIM
W403FBD-050609 05/06/09 17:45 014				
Naphthalene	1.9 J	8.6	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9E070283

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9E070283

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C SIM	Rhain Carpenter	000130

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9E070283

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LCJ6V	001	E2-050609	05/06/09	08:20
LCJ60	002	E3-050609	05/06/09	08:30
LCJ63	003	E13-050609	05/06/09	08:40
LCJ65	004	E15-050609	05/06/09	08:50
LCJ66	005	W29-050609	05/06/09	13:40
LCJ67	006	THERMOTECH-050609	05/06/09	14:20
LCJ69	007	SLP6-050609	05/06/09	11:00
LCJ7F	008	W401-050609	05/06/09	09:15
LCJ7G	009	W402-050609	05/06/09	12:45
LCJ7H	010	SLP4-050609	05/06/09	16:00
LCJ7M	011	W403-050609	05/06/09	17:30
LCJ7Q	012	W403DUP-050609	05/06/09	17:35
LCJ7T	013	W403FB-050609	05/06/09	17:40
LCJ7V	014	W403FBD-050609	05/06/09	17:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: E2-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-001 **Work Order #...:** LCJ6V1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 01:42
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**0.85 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**1.8 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**1.9 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.9 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**1.4 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	26 *	(28 - 101)
Fluorene d-10	53	(23 - 84)
Naphthalene-d8	49	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: E3-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-002 **Work Order #...:** LCJ601AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 02:16
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	36	(28 - 101)
Fluorene d-10	60	(23 - 84)
Naphthalene-d8	55	(22 - 97)

City of Saint Louis Park

Client Sample ID: E13-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-003 **Work Order #...:** LCJ631AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 02:51
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**130**	**5.7**	**ng/L**
Acenaphthylene	**10**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**3.3 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**9.0**	**5.0**	**ng/L**
Fluoranthene	**3.9 J**	**4.6**	**ng/L**
Fluorene	**1.0 J**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.6 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**9.9**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	22 *	(28 - 101)
Fluorene d-10	55	(23 - 84)
Naphthalene-d8	51	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: E15-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-004 **Work Order #...:** LCJ651AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 03:26
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**5.2 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	27 *	(28 - 101)
Fluorene d-10	55	(23 - 84)
Naphthalene-d8	52	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W29-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-005 **Work Order #...:** LCJ661AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 04:00
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**5.7**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	**1.3 J**	**4.2**	**ng/L**
Benzo(a)anthracene	**1.2 J**	**4.3**	**ng/L**
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**1.0 J**	**5.0**	**ng/L**
Fluoranthene	**7.1**	**4.6**	**ng/L**
Fluorene	**2.3 J**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**9.2**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	27 *	(28 - 101)
Fluorene d-10	56	(23 - 84)
Naphthalene-d8	51	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: THERMOTECH-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-006 **Work Order #...:** LCJ671AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 04:35
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	17 *	(28 - 101)
Fluorene d-10	46	(23 - 84)
Naphthalene-d8	43	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

City of Saint Louis Park

Client Sample ID: SLP6-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-007 **Work Order #...:** LCJ691AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 05:10
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**68**	**5.7**	**ng/L**
Acenaphthylene	**8.7**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**1.4 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**6.4**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.5 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**1.3 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**43**	**5.0**	**ng/L**
Fluoranthene	**3.9 J**	**4.6**	**ng/L**
Fluorene	ND	4.1	ng/L
Indene	**3.9 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	**1.0 J**	**5.6**	**ng/L**
Naphthalene	**3.0 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**2.2 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	11 *	(28 - 101)
Fluorene d-10	43	(23 - 84)
Naphthalene-d8	38	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W401-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-008 **Work Order #...:** LCJ7F1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 05:44
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**25**	**5.7**	**ng/L**
Acenaphthylene	**1.4 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**0.83 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**0.99 J**	**4.1**	**ng/L**
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	**2.6 J**	**4.6**	**ng/L**
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.4 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**10**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	28	(28 - 101)
Fluorene d-10	54	(23 - 84)
Naphthalene-d8	52	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W402-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-009 **Work Order #...:** LCJ7G1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 06:19
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**5.8**	**5.7**	**ng/L**
Acenaphthylene	**1.4 J**	**4.8**	**ng/L**
Acridine	**13**	**6.5**	**ng/L**
Anthracene	**63**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	**1.9 J**	**5.6**	**ng/L**
Carbazole	**2.0 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**3.7 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.4 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**2.9 J**	**5.0**	**ng/L**
Fluoranthene	**3.6 J**	**4.6**	**ng/L**
Fluorene	**5.3**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	**3.0 J**	**4.7**	**ng/L**
2-Methylnaphthalene	**3.4 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**5.0 J**	**5.6**	**ng/L**
Naphthalene	**8.1 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**6.6**	**6.3**	**ng/L**
Pyrene	**19**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	3.5 *	(28 - 101)
Fluorene d-10	44	(23 - 84)
Naphthalene-d8	29	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP4-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-010 **Work Order #...:** LCJ7H1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 06:54
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**54**	**5.7**	**ng/L**
Acenaphthylene	**2.3 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**1.1 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**3.2 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**3.3 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**28**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**5.4**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.8 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**8.0**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	22 *	(28 - 101)
Fluorene d-10	57	(23 - 84)
Naphthalene-d8	52	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W403-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-011 **Work Order #...:** LCJ7M1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/11/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9131150 **Analysis Time..:** 19:34
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**3.2 J**	**5.7**	**ng/L**
Acenaphthylene	**11**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**11**	**4.2**	**ng/L**
Benzo(a)anthracene	**65**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**97**	**4.7**	**ng/L**
Benzo(k)fluoranthene	**35**	**4.1**	**ng/L**
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	**53**	**6.2**	**ng/L**
Benzo(a)pyrene	**82**	**2.5**	**ng/L**
Benzo(e)pyrene	**49**	**4.3**	**ng/L**
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	**1.5 J**	**5.6**	**ng/L**
Carbazole	**6.1**	**3.8**	**ng/L**
Chrysene	**55**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	**15**	**5.9**	**ng/L**
Dibenzofuran	**2.2 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.7 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**1.0 J**	**5.0**	**ng/L**
Fluoranthene	**100**	**4.6**	**ng/L**
Fluorene	**3.5 J**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	**48**	**5.4**	**ng/L**
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**2.7 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**2.4 J**	**5.6**	**ng/L**
Naphthalene	**5.5 J**	**8.6**	**ng/L**
Perylene	**15**	**3.8**	**ng/L**
Phenanthrene	**28**	**6.3**	**ng/L**
Pyrene	**97**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	7.4 *	(28 - 101)
Fluorene d-10	40	(23 - 84)
Naphthalene-d8	28	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W403DUP-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-012 **Work Order #...:** LCJ7Q1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/11/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9131150 **Analysis Time..:** 20:12
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**2.3 J**	**5.7**	**ng/L**
Acenaphthylene	**8.2**	**4.8**	**ng/L**
Acridine	**7.8**	**6.5**	**ng/L**
Anthracene	**8.1**	**4.2**	**ng/L**
Benzo(a)anthracene	**42**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**61**	**4.7**	**ng/L**
Benzo(k)fluoranthene	**20**	**4.1**	**ng/L**
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	**33**	**6.2**	**ng/L**
Benzo(a)pyrene	**50**	**2.5**	**ng/L**
Benzo(e)pyrene	**31**	**4.3**	**ng/L**
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	**4.8**	**3.8**	**ng/L**
Chrysene	**35**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	**9.3**	**5.9**	**ng/L**
Dibenzofuran	**1.6 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.3 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**0.97 J**	**5.0**	**ng/L**
Fluoranthene	**66**	**4.6**	**ng/L**
Fluorene	**2.6 J**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	**32**	**5.4**	**ng/L**
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**2.2 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**2.0 J**	**5.6**	**ng/L**
Naphthalene	**4.8 J**	**8.6**	**ng/L**
Perylene	**9.3**	**3.8**	**ng/L**
Phenanthrene	**18**	**6.3**	**ng/L**
Pyrene	**64**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	8.0 *	(28 - 101)
Fluorene d-10	42	(23 - 84)
Naphthalene-d8	30	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W403FB-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-013 **Work Order #...:** LCJ7T1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/11/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9131150 **Analysis Time..:** 23:44
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.9 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	49	(28 - 101)
Fluorene d-10	42	(23 - 84)
Naphthalene-d8	43	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W403FBD-050609

GC/MS Semivolatiles

Lot-Sample #...: D9E070283-014 **Work Order #...:** LCJ7V1AA **Matrix.....:** WG
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/11/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9131150 **Analysis Time..:** 00:21
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.9 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	55	(28 - 101)
Fluorene d-10	49	(23 - 84)
Naphthalene-d8	53	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9E070283

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9129037	9129019
002	WG	SW846 8270C SIM		9129037	9129019
003	WG	SW846 8270C SIM		9129037	9129019
004	WG	SW846 8270C SIM		9129037	9129019
005	WG	SW846 8270C SIM		9129037	9129019
006	WG	SW846 8270C SIM		9129037	9129019
007	WG	SW846 8270C SIM		9129037	9129019
008	WG	SW846 8270C SIM		9129037	9129019
009	WG	SW846 8270C SIM		9129037	9129019
010	WG	SW846 8270C SIM		9129037	9129019
011	WG	SW846 8270C SIM		9131150	
012	WG	SW846 8270C SIM		9131150	
013	WG	SW846 8270C SIM		9131150	
014	WG	SW846 8270C SIM		9131150	

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCNVW1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E090000-037

Prep Date.....: 05/09/09 **Analysis Time..:** 23:23
Analysis Date..: 05/14/09 **Prep Batch #...:** 9129037
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	57	(28 - 101)
Fluorene d-10	50	(23 - 84)
Naphthalene-d8	52	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCP7L1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E110000-150

Prep Date.....: 05/11/09 **Analysis Time..:** 17:33
Analysis Date..: 05/14/09 **Prep Batch #...:** 9131150
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	46	(28 - 101)
Fluorene d-10	37	(23 - 84)
Naphthalene-d8	47	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCNVW1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E090000-037
Prep Date.....: 05/09/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9129037 **Analysis Time..:** 23:58
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	53	(30 - 150)	SW846 8270C SIM
Acenaphthylene	44	(30 - 150)	SW846 8270C SIM
Acridine	0.0	(30 - 150)	SW846 8270C SIM
Anthracene	41	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	54	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	68	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	66	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	47	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	57	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	11 a	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	52	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	55	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	35	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	26 a	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	2.6 a	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	28 a	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	50	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	35	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	50	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	62	(37 - 105)	SW846 8270C SIM
3-Methylcholanthrene	15 a	(30 - 150)	SW846 8270C SIM
Benzo(b)thiophene	51	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	51	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	51	(30 - 150)	SW846 8270C SIM
Biphenyl	52	(30 - 150)	SW846 8270C SIM
Carbazole	44	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	52	(30 - 150)	SW846 8270C SIM
Chrysene	70	(20 - 136)	SW846 8270C SIM
Dibenzo(a,h)anthracene	57	(30 - 150)	SW846 8270C SIM
Dibenzofuran	53	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	53	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	48	(30 - 150)	SW846 8270C SIM
Fluoranthene	54	(30 - 150)	SW846 8270C SIM

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCNVW1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E090000-037

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**54**	**(34 - 96)**	**SW846 8270C SIM**
Indene	**50**	**(22 - 86)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**57**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**39**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**51**	**(25 - 95)**	**SW846 8270C SIM**
1-Methylnaphthalene	**52**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**54**	**(27 - 95)**	**SW846 8270C SIM**
Perylene	**47**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**57**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**54**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**34**	**(20 - 112)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	61	(28 - 101)
Fluorene d-10	49	(23 - 84)
Naphthalene-d8	49	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCNVW1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E090000-037
Prep Date.....: 05/09/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9129037 **Analysis Time..:** 23:58
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	40.0	ng/L	53	SW846 8270C S
Acenaphthylene	75.0	32.8	ng/L	44	SW846 8270C S
Acridine	75.0		ng/L	0.0	SW846 8270C S
Anthracene	75.0	30.7	ng/L	41	SW846 8270C S
Benzo(a)anthracene	75.0	40.8	ng/L	54	SW846 8270C S
Benzo(b)fluoranthene	75.0	51.1	ng/L	68	SW846 8270C S
Benzo(k)fluoranthene	75.0	49.4	ng/L	66	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	35.2	ng/L	47	SW846 8270C S
Dibenz(a,h)acridine	75.0	42.6	ng/L	57	SW846 8270C S
Dibenz(a,j)acridine	75.0	7.94 a	ng/L	11	SW846 8270C S
2,3-Benzofuran	75.0	39.3	ng/L	52	SW846 8270C S
Benzo(ghi)perylene	75.0	41.6	ng/L	55	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	26.2	ng/L	35	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	19.8 a	ng/L	26	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	1.97 a	ng/L	2.6	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	21.1 a	ng/L	28	SW846 8270C S
Benzo(a)pyrene	75.0	37.3	ng/L	50	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	26.5	ng/L	35	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	37.6	ng/L	50	SW846 8270C S
Benzo(e)pyrene	75.0	46.3	ng/L	62	SW846 8270C S
3-Methylcholanthrene	75.0	11.6 a	ng/L	15	SW846 8270C S
Benzo(b)thiophene	75.0	37.9	ng/L	51	SW846 8270C S
6-Methylchrysene	75.0	38.5	ng/L	51	SW846 8270C S
1-Methylphenanthrene	75.0	38.6	ng/L	51	SW846 8270C S
Biphenyl	75.0	39.0	ng/L	52	SW846 8270C S
Carbazole	75.0	32.7	ng/L	44	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	38.8	ng/L	52	SW846 8270C S
Chrysene	75.0	52.8	ng/L	70	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	42.4	ng/L	57	SW846 8270C S
Dibenzofuran	75.0	40.1	ng/L	53	SW846 8270C S
Dibenzothiophene	75.0	39.8	ng/L	53	SW846 8270C S
2,3-Dihydroindene	75.0	35.8	ng/L	48	SW846 8270C S
Fluoranthene	75.0	40.8	ng/L	54	SW846 8270C S

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCNVW1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E090000-037

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**75.0**	**40.3**	**ng/L**	**54**	**SW846 8270C S**
Indene	**75.0**	**37.9**	**ng/L**	**50**	**SW846 8270C S**
Indeno(1,2,3-cd)pyrene	**75.0**	**42.6**	**ng/L**	**57**	**SW846 8270C S**
Indole	**75.0**	**29.1**	**ng/L**	**39**	**SW846 8270C S**
2-Methylnaphthalene	**75.0**	**38.6**	**ng/L**	**51**	**SW846 8270C S**
1-Methylnaphthalene	**75.0**	**39.0**	**ng/L**	**52**	**SW846 8270C S**
Naphthalene	**75.0**	**40.6**	**ng/L**	**54**	**SW846 8270C S**
Perylene	**75.0**	**35.0**	**ng/L**	**47**	**SW846 8270C S**
Phenanthrene	**75.0**	**42.6**	**ng/L**	**57**	**SW846 8270C S**
Pyrene	**75.0**	**40.2**	**ng/L**	**54**	**SW846 8270C S**
Quinoline	**75.0**	**25.8**	**ng/L**	**34**	**SW846 8270C S**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	61	(28 - 101)
Fluorene d-10	49	(23 - 84)
Naphthalene-d8	49	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD
Prep Date.....: 05/11/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9131150 **Analysis Time..:** 18:10
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	61	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.4	(0-50)	SW846 8270C SIM
Acenaphthylene	43	(30 - 150)			SW846 8270C SIM
	42	(30 - 150)	2.3	(0-50)	SW846 8270C SIM
Acridine	27 a	(30 - 150)			SW846 8270C SIM
	21 a	(30 - 150)	26	(0-50)	SW846 8270C SIM
Anthracene	45	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	1.5	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	48	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	5.0	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	65	(30 - 150)			SW846 8270C SIM
	62	(30 - 150)	5.2	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	68	(30 - 150)			SW846 8270C SIM
	65	(30 - 150)	5.9	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	45	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	5.6	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	49	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	1.3	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	41	(30 - 150)			SW846 8270C SIM
	32	(30 - 150)	23	(0-50)	SW846 8270C SIM
2,3-Benzofuran	60	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.4	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	56	(30 - 150)			SW846 8270C SIM
	59	(30 - 150)	4.0	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	35	(30 - 150)			SW846 8270C SIM
	38	(30 - 150)	10	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	25 a	(30 - 150)			SW846 8270C SIM
	29 a	(30 - 150)	18	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	8.6 a	(30 - 150)			SW846 8270C SIM
	16 a,p	(30 - 150)	60	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	27 a	(30 - 150)			SW846 8270C SIM
	32	(30 - 150)	18	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	52	(30 - 150)			SW846 8270C SIM
	53	(30 - 150)	1.3	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	38	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	23	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	59	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	4.6	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	65	(37 - 105)			SW846 8270C SIM
	61	(37 - 105)	5.8	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	61	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	5.1	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	24 a	(30 - 150)			SW846 8270C SIM
	37	(30 - 150)	44	(0-50)	SW846 8270C SIM
6-Methylchrysene	47	(30 - 150)			SW846 8270C SIM
	47	(30 - 150)	0.16	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	50	(30 - 150)			SW846 8270C SIM
	47	(30 - 150)	5.9	(0-50)	SW846 8270C SIM
Biphenyl	64	(30 - 150)			SW846 8270C SIM
	61	(30 - 150)	4.8	(0-50)	SW846 8270C SIM
Carbazole	58	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	5.2	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	48	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	4.8	(0-50)	SW846 8270C SIM
Chrysene	64	(20 - 136)			SW846 8270C SIM
	63	(20 - 136)	1.7	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	50	(30 - 150)			SW846 8270C SIM
	50	(30 - 150)	0.10	(0-50)	SW846 8270C SIM
Dibenzofuran	67	(30 - 150)			SW846 8270C SIM
	64	(30 - 150)	5.2	(0-50)	SW846 8270C SIM
Dibenzothiophene	59	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	5.9	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	59	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	5.0	(0-50)	SW846 8270C SIM
Fluoranthene	50	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	3.8	(0-50)	SW846 8270C SIM
Fluorene	53	(34 - 96)			SW846 8270C SIM
	51	(34 - 96)	5.7	(0-50)	SW846 8270C SIM
Indene	57	(22 - 86)			SW846 8270C SIM
	55	(22 - 86)	3.4	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	49	(30 - 150)			SW846 8270C SIM
	51	(30 - 150)	4.9	(0-50)	SW846 8270C SIM
Indole	52	(30 - 150)			SW846 8270C SIM
	53	(30 - 150)	1.0	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	61	(25 - 95)			SW846 8270C SIM
	58	(25 - 95)	4.7	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	61	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.4	(0-50)	SW846 8270C SIM
Naphthalene	62	(27 - 95)			SW846 8270C SIM
	58	(27 - 95)	5.2	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**57**	**(30 - 150)**			**SW846 8270C SIM**
	58	**(30 - 150)**	**2.0**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**63**	**(30 - 150)**			**SW846 8270C SIM**
	59	**(30 - 150)**	**5.4**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**49**	**(30 - 150)**			**SW846 8270C SIM**
	47	**(30 - 150)**	**4.6**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**52**	**(20 - 112)**			**SW846 8270C SIM**
	51	**(20 - 112)**	**0.18**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	60	(28 - 101)
	58	(28 - 101)
Fluorene d-10	50	(23 - 84)
	48	(23 - 84)
Naphthalene-d8	59	(22 - 97)
	57	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD
Prep Date.....: 05/11/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9131150 **Analysis Time..:** 18:10
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	75.0	45.6	ng/L	61		SW846 8270C SIM
	75.0	43.6	ng/L	58	4.4	SW846 8270C SIM
Acenaphthylene	75.0	32.6	ng/L	43		SW846 8270C SIM
	75.0	31.9	ng/L	42	2.3	SW846 8270C SIM
Acridine	75.0	20.0 a	ng/L	27		SW846 8270C SIM
	75.0	15.5 a	ng/L	21	26	SW846 8270C SIM
Anthracene	75.0	33.8	ng/L	45		SW846 8270C SIM
	75.0	34.4	ng/L	46	1.5	SW846 8270C SIM
Benzo(a)anthracene	75.0	36.1	ng/L	48		SW846 8270C SIM
	75.0	34.3	ng/L	46	5.0	SW846 8270C SIM
Benzo(b)fluoranthene	75.0	48.9	ng/L	65		SW846 8270C SIM
	75.0	46.4	ng/L	62	5.2	SW846 8270C SIM
Benzo(k)fluoranthene	75.0	51.3	ng/L	68		SW846 8270C SIM
	75.0	48.4	ng/L	65	5.9	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	75.0	33.9	ng/L	45		SW846 8270C SIM
	75.0	32.0	ng/L	43	5.6	SW846 8270C SIM
Dibenz(a,h)acridine	75.0	36.5	ng/L	49		SW846 8270C SIM
	75.0	36.0	ng/L	48	1.3	SW846 8270C SIM
Dibenz(a,j)acridine	75.0	30.7	ng/L	41		SW846 8270C SIM
	75.0	24.4	ng/L	32	23	SW846 8270C SIM
2,3-Benzofuran	75.0	45.2	ng/L	60		SW846 8270C SIM
	75.0	43.3	ng/L	58	4.4	SW846 8270C SIM
Benzo(ghi)perylene	75.0	42.2	ng/L	56		SW846 8270C SIM
	75.0	43.9	ng/L	59	4.0	SW846 8270C SIM
Dibenzo(a,e)pyrene	75.0	26.0	ng/L	35		SW846 8270C SIM
	75.0	28.7	ng/L	38	10	SW846 8270C SIM
Dibenzo(a,i)pyrene	75.0	18.4 a	ng/L	25		SW846 8270C SIM
	75.0	22.0 a	ng/L	29	18	SW846 8270C SIM
Dibenzo(a,h)pyrene	75.0	6.44 a	ng/L	8.6		SW846 8270C SIM
	75.0	12.0 a,p	ng/L	16	60	SW846 8270C SIM
Dibenzo(a,l)pyrene	75.0	20.2 a	ng/L	27		SW846 8270C SIM
	75.0	24.2	ng/L	32	18	SW846 8270C SIM
Benzo(a)pyrene	75.0	39.0	ng/L	52		SW846 8270C SIM
	75.0	39.5	ng/L	53	1.3	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	75.0	28.4	ng/L	38		SW846 8270C SIM
	75.0	35.9	ng/L	48	23	SW846 8270C SIM
2,6-Dimethylnaphthalene	75.0	43.9	ng/L	59		SW846 8270C SIM
	75.0	41.9	ng/L	56	4.6	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzo(e)pyrene	75.0	48.7	ng/L	65		SW846 8270C SIM
	75.0	45.9	ng/L	61	5.8	SW846 8270C SIM
Benzo(b)thiophene	75.0	46.0	ng/L	61		SW846 8270C SIM
	75.0	43.7	ng/L	58	5.1	SW846 8270C SIM
3-Methylcholanthrene	75.0	17.9 a	ng/L	24		SW846 8270C SIM
	75.0	28.1	ng/L	37	44	SW846 8270C SIM
6-Methylchrysene	75.0	35.5	ng/L	47		SW846 8270C SIM
	75.0	35.6	ng/L	47	0.16	SW846 8270C SIM
1-Methylphenanthrene	75.0	37.7	ng/L	50		SW846 8270C SIM
	75.0	35.6	ng/L	47	5.9	SW846 8270C SIM
Biphenyl	75.0	48.0	ng/L	64		SW846 8270C SIM
	75.0	45.8	ng/L	61	4.8	SW846 8270C SIM
Carbazole	75.0	43.3	ng/L	58		SW846 8270C SIM
	75.0	41.1	ng/L	55	5.2	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	75.0	35.9	ng/L	48		SW846 8270C SIM
	75.0	34.2	ng/L	46	4.8	SW846 8270C SIM
Chrysene	75.0	48.0	ng/L	64		SW846 8270C SIM
	75.0	47.2	ng/L	63	1.7	SW846 8270C SIM
Dibenzo(a,h)anthracene	75.0	37.7	ng/L	50		SW846 8270C SIM
	75.0	37.6	ng/L	50	0.10	SW846 8270C SIM
Dibenzofuran	75.0	50.5	ng/L	67		SW846 8270C SIM
	75.0	47.9	ng/L	64	5.2	SW846 8270C SIM
Dibenzothiophene	75.0	44.0	ng/L	59		SW846 8270C SIM
	75.0	41.5	ng/L	55	5.9	SW846 8270C SIM
2,3-Dihydroindene	75.0	44.2	ng/L	59		SW846 8270C SIM
	75.0	42.0	ng/L	56	5.0	SW846 8270C SIM
Fluoranthene	75.0	37.2	ng/L	50		SW846 8270C SIM
	75.0	35.8	ng/L	48	3.8	SW846 8270C SIM
Fluorene	75.0	40.1	ng/L	53		SW846 8270C SIM
	75.0	37.9	ng/L	51	5.7	SW846 8270C SIM
Indene	75.0	42.4	ng/L	57		SW846 8270C SIM
	75.0	41.0	ng/L	55	3.4	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	75.0	36.6	ng/L	49		SW846 8270C SIM
	75.0	38.4	ng/L	51	4.9	SW846 8270C SIM
Indole	75.0	39.0	ng/L	52		SW846 8270C SIM
	75.0	39.4	ng/L	53	1.0	SW846 8270C SIM
2-Methylnaphthalene	75.0	45.5	ng/L	61		SW846 8270C SIM
	75.0	43.4	ng/L	58	4.7	SW846 8270C SIM
1-Methylnaphthalene	75.0	45.4	ng/L	61		SW846 8270C SIM
	75.0	43.4	ng/L	58	4.4	SW846 8270C SIM
Naphthalene	75.0	46.2	ng/L	62		SW846 8270C SIM
	75.0	43.8	ng/L	58	5.2	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Perylene	**75.0**	**42.7**	**ng/L**	**57**		**SW846 8270C SIM**
	75.0	**43.5**	**ng/L**	**58**	**2.0**	**SW846 8270C SIM**
Phenanthrene	**75.0**	**46.9**	**ng/L**	**63**		**SW846 8270C SIM**
	75.0	**44.4**	**ng/L**	**59**	**5.4**	**SW846 8270C SIM**
Pyrene	**75.0**	**36.5**	**ng/L**	**49**		**SW846 8270C SIM**
	75.0	**34.9**	**ng/L**	**47**	**4.6**	**SW846 8270C SIM**
Quinoline	**75.0**	**38.7**	**ng/L**	**52**		**SW846 8270C SIM**
	75.0	**38.6**	**ng/L**	**51**	**0.18**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	60	(28 - 101)
	58	(28 - 101)
Fluorene d-10	50	(23 - 84)
	48	(23 - 84)
Naphthalene-d8	59	(22 - 97)
	57	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCJ7H1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E070283-010 LCJ7H1AD-MSD
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 07:29
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	56	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	8.3	(0-50)	SW846 8270C SIM
Acenaphthylene	68	(30 - 150)			SW846 8270C SIM
	61	(30 - 150)	16	(0-50)	SW846 8270C SIM
Acridine	23 a	(30 - 150)			SW846 8270C SIM
	75 p	(30 - 150)	101	(0-50)	SW846 8270C SIM
Anthracene	73	(30 - 150)			SW846 8270C SIM
	68	(30 - 150)	12	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	39	(30 - 150)			SW846 8270C SIM
	33	(30 - 150)	21	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	12 a	(30 - 150)			SW846 8270C SIM
	12 a	(30 - 150)	13	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	9.7 a	(30 - 150)			SW846 8270C SIM
	7.7 a	(30 - 150)	29	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	12 a	(30 - 150)			SW846 8270C SIM
	9.1 a	(30 - 150)	35	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	15 a	(30 - 150)			SW846 8270C SIM
	12 a	(30 - 150)	28	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	5.9 a	(30 - 150)			SW846 8270C SIM
	9.9 a	(30 - 150)	44	(0-50)	SW846 8270C SIM
2,3-Benzofuran	50	(30 - 150)			SW846 8270C SIM
	47	(30 - 150)	12	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	5.1 a	(30 - 150)			SW846 8270C SIM
	4.8 a	(30 - 150)	13	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	4.3 a	(30 - 150)			SW846 8270C SIM
	3.7 a	(30 - 150)	21	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	3.2 a	(30 - 150)			SW846 8270C SIM
	2.1 a	(30 - 150)	46	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	1.7 a	(30 - 150)			SW846 8270C SIM
	1.2 a	(30 - 150)	36	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	14 a	(30 - 150)			SW846 8270C SIM
	10 a	(30 - 150)	36	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	11 a	(30 - 150)			SW846 8270C SIM
	8.3 a	(30 - 150)	30	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	77	(30 - 150)			SW846 8270C SIM
	69	(30 - 150)	18	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	55	(30 - 150)			SW846 8270C SIM
	52	(30 - 150)	12	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCJ7H1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E070283-010 LCJ7H1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	9.8 a	(37 - 105)			SW846 8270C SIM
	8.5 a	(37 - 105)	20	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	52	(30 - 150)			SW846 8270C SIM
	49	(30 - 150)	11	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	15 a	(30 - 150)			SW846 8270C SIM
	12 a	(30 - 150)	28	(0-50)	SW846 8270C SIM
6-Methylchrysene	23 a	(30 - 150)			SW846 8270C SIM
	20 a	(30 - 150)	24	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	70	(30 - 150)			SW846 8270C SIM
	67	(30 - 150)	10	(0-50)	SW846 8270C SIM
Biphenyl	53	(30 - 150)			SW846 8270C SIM
	49	(30 - 150)	14	(0-50)	SW846 8270C SIM
Carbazole	76	(30 - 150)			SW846 8270C SIM
	72	(30 - 150)	12	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	60	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	13	(0-50)	SW846 8270C SIM
Chrysene	28	(20 - 136)			SW846 8270C SIM
	24	(20 - 136)	22	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	4.9 a	(30 - 150)			SW846 8270C SIM
	4.1 a	(30 - 150)	23	(0-50)	SW846 8270C SIM
Dibenzofuran	58	(30 - 150)			SW846 8270C SIM
	54	(30 - 150)	13	(0-50)	SW846 8270C SIM
Dibenzothiophene	60	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	10	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	44	(30 - 150)			SW846 8270C SIM
	40	(30 - 150)	8.1	(0-50)	SW846 8270C SIM
Fluoranthene	79	(30 - 150)			SW846 8270C SIM
	74	(30 - 150)	12	(0-50)	SW846 8270C SIM
Fluorene	60	(34 - 96)			SW846 8270C SIM
	56	(34 - 96)	12	(0-50)	SW846 8270C SIM
Indene	52	(22 - 86)			SW846 8270C SIM
	47	(22 - 86)	13	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	5.6 a	(30 - 150)			SW846 8270C SIM
	5.0 a	(30 - 150)	17	(0-50)	SW846 8270C SIM
Indole	59	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	12	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	54	(25 - 95)			SW846 8270C SIM
	50	(25 - 95)	13	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	53	(30 - 150)			SW846 8270C SIM
	50	(30 - 150)	12	(0-50)	SW846 8270C SIM
Naphthalene	53	(27 - 95)			SW846 8270C SIM
	50	(27 - 95)	12	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCJ7H1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E070283-010 LCJ7H1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**7.3 a**	**(30 - 150)**			**SW846 8270C SIM**
	7.0 a	**(30 - 150)**	**11**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**60**	**(30 - 150)**			**SW846 8270C SIM**
	58	**(30 - 150)**	**9.2**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**77**	**(30 - 150)**			**SW846 8270C SIM**
	72	**(30 - 150)**	**12**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**56**	**(20 - 112)**			**SW846 8270C SIM**
	56	**(20 - 112)**	**5.4**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	27 *	(28 - 101)
	23 *	(28 - 101)
Fluorene d-10	55	(23 - 84)
	52	(23 - 84)
Naphthalene-d8	51	(22 - 97)
	49	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCJ7H1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E070283-010 LCJ7H1AD-MSD
Date Sampled...: 05/06/09 **Date Received..:** 05/07/09
Prep Date.....: 05/09/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9129037 **Analysis Time..:** 07:29
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	54	76.9	97.0	ng/L	56		SW846 8270C SIM
	54	72.2	89.2	ng/L	48	8.3	SW846 8270C SIM
Acenaphthylene	2.3	76.9	54.4	ng/L	68		SW846 8270C SIM
	2.3	72.2	46.2	ng/L	61	16	SW846 8270C SIM
Acridine	ND	76.9	17.8	ng/L	23 a		SW846 8270C SIM
	ND	72.2	54.0	ng/L	75 p	101	SW846 8270C SIM
Anthracene	1.1	76.9	56.9	ng/L	73		SW846 8270C SIM
	1.1	72.2	50.4	ng/L	68	12	SW846 8270C SIM
Benzo(a)anthracene	ND	76.9	29.8	ng/L	39		SW846 8270C SIM
	ND	72.2	24.0	ng/L	33	21	SW846 8270C SIM
Benzo(b)fluoranthene	ND	76.9	9.53	ng/L	12 a		SW846 8270C SIM
	ND	72.2	8.41	ng/L	12 a	13	SW846 8270C SIM
Benzo(k)fluoranthene	ND	76.9	7.42	ng/L	9.7 a		SW846 8270C SIM
	ND	72.2	5.57	ng/L	7.7 a	29	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	ND	76.9	9.37	ng/L	12 a		SW846 8270C SIM
	ND	72.2	6.57	ng/L	9.1 a	35	SW846 8270C SIM
Dibenz(a,h)acridine	ND	76.9	11.4	ng/L	15 a		SW846 8270C SIM
	ND	72.2	8.61	ng/L	12 a	28	SW846 8270C SIM
Dibenz(a,j)acridine	ND	76.9	4.57	ng/L	5.9 a		SW846 8270C SIM
	ND	72.2	7.14	ng/L	9.9 a	44	SW846 8270C SIM
2,3-Benzofuran	ND	76.9	38.4	ng/L	50		SW846 8270C SIM
	ND	72.2	34.2	ng/L	47	12	SW846 8270C SIM
Benzo(ghi)perylene	ND	76.9	3.95	ng/L	5.1 a		SW846 8270C SIM
	ND	72.2	3.46	ng/L	4.8 a	13	SW846 8270C SIM
Dibenzo(a,e)pyrene	ND	76.9	3.32	ng/L	4.3 a		SW846 8270C SIM
	ND	72.2	2.69	ng/L	3.7 a	21	SW846 8270C SIM
Dibenzo(a,i)pyrene	ND	76.9	2.43	ng/L	3.2 a		SW846 8270C SIM
	ND	72.2	1.52	ng/L	2.1 a	46	SW846 8270C SIM
Dibenzo(a,h)pyrene	ND	76.9	1.27	ng/L	1.7 a		SW846 8270C SIM
	ND	72.2	0.884	ng/L	1.2 a	36	SW846 8270C SIM
Dibenzo(a,l)pyrene	ND	76.9	10.6	ng/L	14 a		SW846 8270C SIM
	ND	72.2	7.40	ng/L	10 a	36	SW846 8270C SIM
Benzo(a)pyrene	ND	76.9	8.14	ng/L	11 a		SW846 8270C SIM
	ND	72.2	6.01	ng/L	8.3 a	30	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	ND	76.9	59.4	ng/L	77		SW846 8270C SIM
	ND	72.2	49.6	ng/L	69	18	SW846 8270C SIM
2,6-Dimethylnaphthalene	ND	76.9	42.6	ng/L	55		SW846 8270C SIM
	ND	72.2	37.8	ng/L	52	12	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCJ7H1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E070283-010 LCJ7H1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	76.9	7.57	ng/L	9.8 a		SW846 8270C SIM
	ND	72.2	6.17	ng/L	8.5 a	20	SW846 8270C SIM
Benzo(b)thiophene	3.2	76.9	42.9	ng/L	52		SW846 8270C SIM
	3.2	72.2	38.4	ng/L	49	11	SW846 8270C SIM
3-Methylcholanthrene	ND	76.9	11.6	ng/L	15 a		SW846 8270C SIM
	ND	72.2	8.79	ng/L	12 a	28	SW846 8270C SIM
6-Methylchrysene	ND	76.9	18.0	ng/L	23 a		SW846 8270C SIM
	ND	72.2	14.1	ng/L	20 a	24	SW846 8270C SIM
1-Methylphenanthrene	0.91	76.9	54.7	ng/L	70		SW846 8270C SIM
	0.91	72.2	49.3	ng/L	67	10	SW846 8270C SIM
Biphenyl	ND	76.9	41.1	ng/L	53		SW846 8270C SIM
	ND	72.2	35.6	ng/L	49	14	SW846 8270C SIM
Carbazole	3.3	76.9	62.0	ng/L	76		SW846 8270C SIM
	3.3	72.2	55.1	ng/L	72	12	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	ND	76.9	46.2	ng/L	60		SW846 8270C SIM
	ND	72.2	40.5	ng/L	56	13	SW846 8270C SIM
Chrysene	ND	76.9	21.2	ng/L	28		SW846 8270C SIM
	ND	72.2	17.0	ng/L	24	22	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	76.9	3.78	ng/L	4.9 a		SW846 8270C SIM
	ND	72.2	2.99	ng/L	4.1 a	23	SW846 8270C SIM
Dibenzofuran	ND	76.9	44.7	ng/L	58		SW846 8270C SIM
	ND	72.2	39.2	ng/L	54	13	SW846 8270C SIM
Dibenzothiophene	ND	76.9	46.0	ng/L	60		SW846 8270C SIM
	ND	72.2	41.6	ng/L	58	10	SW846 8270C SIM
2,3-Dihydroindene	28	76.9	61.9	ng/L	44		SW846 8270C SIM
	28	72.2	57.1	ng/L	40	8.1	SW846 8270C SIM
Fluoranthene	ND	76.9	60.4	ng/L	79		SW846 8270C SIM
	ND	72.2	53.4	ng/L	74	12	SW846 8270C SIM
Fluorene	ND	76.9	46.0	ng/L	60		SW846 8270C SIM
	ND	72.2	40.8	ng/L	56	12	SW846 8270C SIM
Indene	5.4	76.9	45.1	ng/L	52		SW846 8270C SIM
	5.4	72.2	39.6	ng/L	47	13	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	76.9	4.31	ng/L	5.6 a		SW846 8270C SIM
	ND	72.2	3.63	ng/L	5.0 a	17	SW846 8270C SIM
Indole	ND	76.9	45.6	ng/L	59		SW846 8270C SIM
	ND	72.2	40.6	ng/L	56	12	SW846 8270C SIM
2-Methylnaphthalene	ND	76.9	41.2	ng/L	54		SW846 8270C SIM
	ND	72.2	36.2	ng/L	50	13	SW846 8270C SIM
1-Methylnaphthalene	ND	76.9	41.0	ng/L	53		SW846 8270C SIM
	ND	72.2	36.4	ng/L	50	12	SW846 8270C SIM
Naphthalene	1.8	76.9	42.3	ng/L	53		SW846 8270C SIM
	1.8	72.2	37.6	ng/L	50	12	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E070283 **Work Order #...:** LCJ7H1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E070283-010 LCJ7H1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**76.9**	**5.62**	**ng/L**	**7.3 a**		**SW846 8270C SIM**
	ND	**72.2**	**5.05**	**ng/L**	**7.0 a**	**11**	**SW846 8270C SIM**
Phenanthrene	**ND**	**76.9**	**45.8**	**ng/L**	**60**		**SW846 8270C SIM**
	ND	**72.2**	**41.8**	**ng/L**	**58**	**9.2**	**SW846 8270C SIM**
Pyrene	**8.0**	**76.9**	**67.3**	**ng/L**	**77**		**SW846 8270C SIM**
	8.0	**72.2**	**60.0**	**ng/L**	**72**	**12**	**SW846 8270C SIM**
Quinoline	**ND**	**76.9**	**42.9**	**ng/L**	**56**		**SW846 8270C SIM**
	ND	**72.2**	**40.6**	**ng/L**	**56**	**5.4**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	27 *	(28 - 101)
	23 *	(28 - 101)
Fluorene d-10	55	(23 - 84)
	52	(23 - 84)
Naphthalene-d8	51	(22 - 97)
	49	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

3.7 3.3 3.4 1.3
2.8 3.3 IR1
1.8 1.0 LM
5/7/09

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
City of St Louis Park	Scott Anderson	5/6/2009	150780
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 2**
3752 Wooddale Ave	(952) 924-2557		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
St Louis Park / MN / 55416	D. Tarara	Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly (MN)	Fed Ex		
Contract/Purchase Order/Quote No.			
01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH/PETS	Special Instructions/ Conditions of Receipt
E2-050609	05/06/09	0820		X			6						X	
E3-050609	05/06/09	0830		X			6							
E13-050609	05/06/09	0840		X			6							
E15-050609	05/06/09	0850		X			6							
W29-050609	05/06/09	1340		X			6							
Thermotech-050609	05/06/09	1420		X			6							
SLP6-050609	05/06/09	1100		X			6							
W401-050609	05/06/09	0915		X			6							
W402-050609	05/06/09	1245		X			6							
SLP4-050609	05/06/09	1600		X			6							
SLP4MS-050609	05/06/09	1550		X			6							Matrix Spike
SLP4MSD-050609	05/06/09	1555		X			6							Matrix Spike Dup

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	5/6/09	1800	1. Received By	5/7/9	0915
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St Louis Park	Project Manager: Scott Anderson	Date: 5/6/09	Chain of Custody Number: 150783
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 2 of 2
City: St. Louis Park / State: MN / Zip Code: 55416	Site Contact: D. Tarara	Lab Contact: Lisa U.	
Project Name and Location (State): Reilly (MN)	Carrier/Waybill Number: Fed Ex		
Contract/Purchase Order/Quote No.: 01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH ppbs
W403-050609	05/06/09	1730		X			6						X
W403DUP-050609		1735		X			6						X
W403FB-050609		1740		X			6						X
W403FBD-050609	↓	1745		X			6						X

Special Instructions/ Conditions of Receipt

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [ ] 14 Days [ ] 21 Days [ ] Other ____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	5/6/09	1800	1. Received By	5/7/9	0915
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

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Memorandum

Date: March 7, 2010

To: Bill Gregg

From: Linda Adams/Westford

Subject: Data Validation
PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9E070283
Appendix E

Distribution: R. Kennedy/Westford

60145681 File
SA036pahlms

SUMMARY

Full validation was performed on the data for the analysis of 12 aqueous samples and two field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C, selected ion monitoring (SIM) method. The samples were collected on May 6, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9E070283.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. The nondetect results for several compounds in sample SLP4-050609 were rejected due to matrix spike and/or matrix spike duplicate recoveries of <10%. All nondetect results in samples W402-050609, W403-050609, and W403DUP-050609 were rejected due to surrogate recoveries of <10%. Selected other data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
E2-050609	E3-050609
E13-050609	E15-050609
W29-050609	Thermotech-050609
SLP6-050609	W401-050609
W402-050609	SLP4-050609

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Sample IDs	Sample IDs
W403-050609	W403DUP-050609 (Field duplicate of W403-050609)
W403-050609 (Field blank)	W405FBD-050609 (Field blank duplicate)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectrometry (GC/MS) tuning
- Initial and continuing calibrations
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Internal standard performance
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancies were noted.

- One of the six bottles for sample Thermotech-050609 was received without a sample ID on the label. The sample was identified according to the sampling date and time listed on the label. No validation action was taken on this basis other than this notation.

- Several of the bottles for sample SLP4-050609 were received labeled as SLP-050609. The samples were identified by the sampling date and time listed on the labels. No validation action was taken on this basis other than this notation.

The target compounds for the samples in this data set are listed on Worksheet #15 of the project specific QAPP. The following discrepancies were noted.

- The laboratory was unable to report the results for benzo(j)fluoranthene since this compound co-elutes with either benzo(k)fluoranthene or benzo(b)fluoranthene. With the exception of samples W403-050609 and W403DUP-050609, benzo(b)fluoranthene and benzo(k)fluoranthene were not detected in any samples. Qualification of the data on this basis was not required. Benzo(b)fluoranthene and benzo(k)fluoranthene were both detected above the sample quantitation limit (SQL) in samples W403-050609 and W403DUP-050609. Based on a review of the chromatograms of these samples, it was apparent that there was co-elution

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between these analytes. The results for benzo(b)fluoranthene and benzo(k)fluoranthene were therefore qualified as estimated (J).

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

Five of the eight cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C. The remaining three cooler temperatures (1.3, 1.8, and 1.0°C) fell slightly below the QC acceptance criteria. No validation action was taken on the basis of this minor nonconformance.

GC/MS Tuning

The frequency and abundance of the decafluorotriphenylphosphine (DFTPP) tuning results were within the QC acceptance criteria. All samples were analyzed within 12 hours from the DFTPP tuning.

The method acceptance limits were met regarding the evaluation of DDT, pentachlorophenol, and benzidine degradation and/or tailing.

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs) and the response factors (RFs) of all target compounds in the initial calibration (IC) and the percent differences (%Ds) and the RFs in the continuing calibrations (CCs) associated with all sample analyses were within the QC acceptance criteria with the following exceptions.

Calibration	Compound	%RSD (IC) %D (CC)	Actions (Detects/Nondetects)
IC 05/08/09	Acridine	23.6	J/UJ
Associated samples: Samples W403-050609, W403DUP-050609, W403FB-050609, and W403FBD-050609.			
CC 05/14/09	Acenaphthylene	31.2	J/UJ
	Fluorene	23.7	J/UJ
	Anthracene	22.6	J/UJ
	Acridine	28.1	J/UJ
	Pyrene	31.8	J/UJ
	Fluoranthene	31.1	J/UJ
	Benzo(a)anthracene	29.7	J/UJ
	Benzo(a)pyrene	21.7	J/UJ
Associated samples: Samples W403FB-050609 and W403FBD-050609.			
CC 05/15/09	Indene*	21.1	J/UJ
	Quinoline*	21.6	J/UJ
	Acenaphthylene	29.1	J/UJ
	Fluorene	22.7	J/UJ
	Anthracene	22.3	J/UJ
	Acridine*	30.9	J/UJ
	Fluoranthene	31.6	J/UJ
	Pyrene	30.6	J/UJ
	Benzo(a)anthracene	33.2	J/UJ
	Benzo(a)pyrene	22.7	J/UJ
	Indeno(123-cd)pyrene	21.8	J/UJ
	Dibenzo(ah)anthracene	22.1	J/UJ
Associated samples: Samples W403-050609 and W403DUP-050609.			

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*Nondetect results for these compounds in the associated samples were rejected due to surrogate nonconformances as indicated below.

Calibration	Compound	%RSD (IC) %D (CC)	Actions (Detects/Nondetects)
IC 05/11/09	Anthracene	18.3	J/UJ
	Acridine	21.5	J/UJ
	Carbazole	21.0	J/UJ
	Fluoranthene	16.2	J/UJ
	Pyrene	17.6	J/UJ
	Benzo(a)anthracene[1]	17.6	J/UJ
	Chrysene[1]	18.2	J/UJ
	Benzo(b)fluoranthene[1]	23.1	J/UJ
	Benzo(k)fluoranthene[1,2]	28.6	J/UJ
	Benzo(a)pyrene[1,2]	24.5	J/UJ
	Indeno(123-cd)pyrene[1,2]	22.6	J/UJ
	Dibenzo(ah)anthracene[1,2]	24.0	J/UJ
Associated samples: All samples except samples W403-050609 , W403DUP-050609, W403FB-050609 and W403FBD-050609.			
CC 05/14/09	Acridine	33.4	J/UJ
Associated samples : All samples except samples W403-050609 , W403DUP-050609, W403FB-050609 and W403FBD-050609.			

[1]Nondetect results for these compounds in sample W402-050609 were rejected due to surrogate nonconformances as indicated below.
[2]Nondetect results for these compounds in sample SLP4-050609 were rejected due to MS/MSD nonconformances as indicated below.

Laboratory Blanks/Field Blanks

Target compounds were not detected in the laboratory method blanks.

The following compounds were detected in the aqueous field blanks. No validation actions were necessary since these results were for informational purposes only.

W403FB-050609	
Compound	**Concentration (ng/L)**
Naphthalene	1.9 J

W403FBD-050609	
Compound	**Concentration (ng/L)**
Naphthalene	1.9 J

Surrogate Spike Recoveries

The surrogate recoveries were within the QC acceptance criteria in all sample analyses with the following exceptions. Qualification of the data for all samples except samples W402-050609, W403-050609, and W403DUP-050609 was not required since only one of three surrogate recoveries fell below the QC acceptance in these sample analyses. Samples W402-050609, W403-050609, and W403DUP-050609 were qualified as indicated below.

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Sample ID	Surrogate			Actions	
	Chrysene-d12	Fluorene-d10	Naphthalene-d8	Detects	Nondetects
E2-050609	26	ok	ok	Accept	Accept
E13-050609	22	ok	ok	Accept	Accept
E15-050609	27	ok	ok	Accept	Accept
W29-050609	27	ok	ok	Accept	Accept
Thermotech-050609	17	ok	ok	Accept	Accept
SLP6-050609	11	ok	ok	Accept	Accept
W401-050609	28	ok	ok	Accept	Accept
W402-050609	3.5	ok	ok	J	R
SLP4-050609	22	ok	ok	Accept	Accept
W403-050609	7.4	40	ok	J	R
W403DUP-050609	8.0	ok	ok	J	R
QAPP QC Limits	**30-118**	**41-162**	**30-118**		

Internal Standard Performance

Internal standard performance met the QC acceptance criteria in all sample analyses with the exception of samples W402-050609 and SLP4-050609. The recovery of perylene-d12 exceeded the acceptance criteria in the analyses of samples W402-050609 and SLP4-050609. Target analytes quantitated from the internal standard perylene-d12 were not detected in these samples. Qualification of the data on this basis was therefore not required.

MS/MSD Results

MS/MSD analyses were performed on sample SLP4-050609 from this data set. All target analytes were spiked. All percent recoveries (%Rs) and relative percent differences (RPDs) were within the QC acceptance criteria with the following exceptions.

Compound	MS %R	MSD %R	RPD	Laboratory QC limits %R (RPD)	Action (Detects/Nondetects)
Acridine	23	ok	101	30-150 (50)	J/UJ
Benzo(b)fluoranthene	12	12	ok	30-150 (50)	J/UJ
Benzo(k)fluoranthene	9.7	7.7	29	30-150 (50)	J/R
Benzo(ghi)perylene	5.1	4.8	ok	30-150 (50)	J/R
Benzo(a)pyrene	11	8.3	ok	30-150 (50)	J/R
Benzo(e)pyrene	9.8	8.5	ok	30-150 (50)*	J/R
Chrysene	28	24	ok	30-132 (50)*	J/UJ
Dibenzo(ah)anthracene	4.9	4.1	ok	30-150 (50)	J/R
Indeno(123-cd)pyrene	5.6	5.0	ok	30-150 (50)	J/R
Perylene	7.3	7.0	ok	30-150 (50)	J/R
Associated sample: SLSP4-050609					

*QAPP QC limits

LCS/LCSD Results

All target analytes were spiked. With the following exception, the %Rs and/or the RPDs were within the QC acceptance criteria for the LCS and/or LCSD analyses.

Compound	LCS %R	LCSD %R	RPD	Laboratory QC limits %R (RPD)	Action (Detects/Nondetects)
Acridine	27	21	ok	30-150 (50)	J/UJ
Associated samples: W403-050609, W403DUP-050609, W403FB-050609, and W403FBD-050609.					

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Field Duplicate Results

Samples W403-050609 and W403DUP-050609 were the field duplicate pair analyzed with this data set. Note that samples W403FB-050609 and W403FBD-050609 are not field samples and should not be considered representative of the sample matrix.

The results for the detected compounds in samples W403-050609 and W403DUP-050609 and their RPDs are tabulated below. The RPDs for acenaphthylene, anthracene, carbazole, dibenzothiophene, 2,3-dihydroindene, fluorene, 2-methylnaphthalene, 1-methylnaphthalene, and naphthalene were within the QC acceptance criteria. The RPDs for acridine and biphenyl were not calculable (NC) due to nondetect results in either the sample or field duplicate sample. Precision was deemed acceptable for these compounds since the detected results were <5x the SQL in either the sample or field duplicate sample. The RPDs for acenaphthene, dibenzo(ah)anthracene, dibenzofuran, perylene, and phenanthrene were deemed acceptable since the detected results for these compounds in sample W403-050609 and the field duplicate sample W403DUP-050609 were all < 5x the SQL and the RPD criterion was doubled. The remaining RPDs exceeded the acceptance criteria.

Compound	W403-050609 (ng/L)	W403DUP-050609 (ng/L)	RPD
Acenaphthene	3.2 J	2.3 J	33
Acenaphthylene	11	8.2	29
Acridine	6.5 U	7.8	NC
Anthracene	11	8.1	30
Benzo(a)anthracene	65	42	43
Benzo(b)fluoranthene	97	61	46
Benzo(k)fluoranthene	35	20	55
Benzo(ghi)perylene	53	33	47
Benzo(a)pyrene	82	50	49
Benzo(e)pyrene	49	31	45
Biphenyl	1.5 J	5.6 U	NC
Carbazole	6.1	4.8	24
Chrysene	55	35	44
Dibenzo(ah)anthracene	15	9.3	47
Dibenzofuran	2.2 J	1.6 J	32
Dibenzothiophene	1.7 J	1.3 J	27
2,3-Dihydroindene	1.0 J	0.97 J	3
Fluoranthene	100	66	41
Fluorene	3.5 J	2.6 J	30
Indeno(123-cd)pyrene	48	32	40
2-Methylnaphthalene	2.7 J	2.2 J	20
1-Methylnaphthalene	2.4 J	2.0 J	18
Naphthalene	5.5 J	4.8 J	14
Perylene	15	9.3	47
Phenanthrene	28	18	44
Pyrene	97	64	41
Criteria: Aqueous RPD ≤ 30, if both sample and duplicate results are > 5x sample quantitation limit (SQL). The RPD criterion is doubled if both sample and duplicate results are <5x SQL.			

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The results for the detected compound in field blank samples W403FB-050609 and W403FBD-050609 and the RPD are tabulated below. The RPD was within the acceptance criteria.

Compound	W24FB-081109 (ng/L)	W24FBD-081109 (ng/L)	RPD
Naphthalene	1.9 J	1.9 J	0
Criteria: Aqueous RPD ≤ 30, if both sample and duplicate results are > 5x sample quantitation limit (SQL). The RPD criterion is doubled if both sample and duplicate results are <5x SQL.			

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted.

The QAPP specified reporting limits were met with the following exceptions. The following table summarizes the reporting limits which exceeded the QAPP specified reporting limits for ppt analysis.

Compound	QAPP RL (ng/L)	Lab RL (ng/L)
Acridine	6.2	6.5
Perylene	3.3	3.8

All samples were analyzed undiluted.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9E110113

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

June 3, 2009

CASE NARRATIVE
D9C130273

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Eighteen samples plus one set of MS/MSD samples were received under chain of custody on May 9, 2009. The samples were received at temperatures of 4.1°C, 3.5°C, 3.8°C and 3.1°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

Sample W437-050809 was analyzed at two different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analysis performed at a 40x dilution, because the extract was diluted beyond the ability to quantitate recoveries.

MS/MSD were performed on sample W434-050709, as requested. All spike parameters were within QC control limits.

No other anomalies were noted.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Surrogate Chrysene-d12 was recovered below the lower control limit in samples SLP4FEED-050709 and SLP15FEED-050709. The samples were reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

The LCS/LCSD associated with QC batch 9131150 exhibited recoveries outside the control limits for the following compounds:

Acridine = LCS at 27% and LCSD at 21% (limits 30-150%)
Dibenzo(a,i)pyrene = LCS at 25% and LCSD at 29% (limits 30-150%)
Dibenzo(a,h)pyrene = LCS at 8.6%, LCSD at 16% (limits 30-150%) and RPD at 60% (limits 0-50%)
Dibenzo(a,l)pyrene = LCS at 27% (limits 30-150%)
3-Methylcholanthrene = LCS at 24% (limits 30-150%)

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

Analytes Dibenzo(a,i)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,l)pyrene and 3-Methylcholanthrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

The method required MS/MSD could not be performed for QC re-extraction batch 9131150, due to insufficient sample volume. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines.

No other anomalies were noted.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9E110113
ANALYSIS: SW846-8270C

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	62
MS	7	7
MS Surrogates	3	3
MSD	7	7
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	48	48
Samples and QC Internal Standard Area	60	60
TOTAL	**272**	**272**
% Completeness	**100.0%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9E110113					
Sample: W131-050709		**DUP: W131DUP-050709**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	ND	Acenaphthene	ND	0.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	ND	2,3-Dihydroindene	ND	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	ND	Naphthalene	ND	0.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND. Considered acceptable if the positive

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9E110113
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	14	14
LCS Surrogates	6	6
FB/FBD	NA	NA
MS	NA	NA
MS Surrogates	NA	NA
MSD	NA	NA
MSD Surrogates	NA	NA
MS/MSD RPD	NA	NA
Sample/Dup. RPD	NA	NA
Sample Surrogates	6	4
Samples and QC Internal Standard Area	15	15
TOTAL	**75**	**73**
% Completeness	**97.3%**	

EXECUTIVE SUMMARY - Detection Highlights

D9E110113

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W422-050709 05/07/09 10:00 001				
Acenaphthene	7.1 J	10	ug/L	SW846 8270C
W421-050709 05/07/09 11:45 004				
Acenaphthene	70	10	ug/L	SW846 8270C
Acridine	3.8 J	10	ug/L	SW846 8270C
Anthracene	5.4 J	10	ug/L	SW846 8270C
Benzo(a)anthracene	4.6 J	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	3.5 J	10	ug/L	SW846 8270C
Benzo(a)pyrene	2.4 J	10	ug/L	SW846 8270C
Benzo(e)pyrene	1.7 J	10	ug/L	SW846 8270C
Benzo(b)thiophene	22	10	ug/L	SW846 8270C
Carbazole	41	10	ug/L	SW846 8270C
Chrysene	3.2 J	10	ug/L	SW846 8270C
Dibenzofuran	19	10	ug/L	SW846 8270C
Dibenzothiophene	5.7 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	74	10	ug/L	SW846 8270C
Fluoranthene	21	10	ug/L	SW846 8270C
Fluorene	32	10	ug/L	SW846 8270C
Indene	22	10	ug/L	SW846 8270C
2-Methylnaphthalene	20	10	ug/L	SW846 8270C
1-Methylnaphthalene	60	10	ug/L	SW846 8270C
Naphthalene	67	10	ug/L	SW846 8270C
Phenanthrene	45	10	ug/L	SW846 8270C
Pyrene	15	10	ug/L	SW846 8270C
SLP4FEED-050709 05/07/09 14:00 006				
Acenaphthene	36	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.3 J	4.8	ng/L	SW846 8270C SIM
Benzo(b)thiophene	2.4 J	5.2	ng/L	SW846 8270C SIM
Carbazole	2.7 J	3.8	ng/L	SW846 8270C SIM
2,3-Dihydroindene	21	5.0	ng/L	SW846 8270C SIM
Indene	3.4 J	4.7	ng/L	SW846 8270C SIM
Naphthalene	1.7 J	8.6	ng/L	SW846 8270C SIM
Pyrene	4.3	4.2	ng/L	SW846 8270C SIM
SLP15FEED-050709 05/07/09 14:30 007				
Acenaphthene	110	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	8.0	4.8	ng/L	SW846 8270C SIM
Benzo(b)thiophene	1.1 J	5.2	ng/L	SW846 8270C SIM
Carbazole	1.2 J	3.8	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E110113

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP15FEED-050709 05/07/09 14:30 007				
Dibenzofuran	1.2 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	2.6 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	2.9 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	3.5 J	4.6	ng/L	SW846 8270C SIM
Fluorene	3.8 J	4.1	ng/L	SW846 8270C SIM
Indole	5.3	4.7	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.8 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	1.2 J	8.6	ng/L	SW846 8270C SIM
Pyrene	11	4.2	ng/L	SW846 8270C SIM
W426-050809 05/08/09 08:40 008				
Acenaphthene	41	10	ug/L	SW846 8270C
Anthracene	2.1 J	10	ug/L	SW846 8270C
Carbazole	7.0 J	10	ug/L	SW846 8270C
Dibenzofuran	12	10	ug/L	SW846 8270C
Dibenzothiophene	1.8 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	6.3 J	10	ug/L	SW846 8270C
Fluorene	20	10	ug/L	SW846 8270C
Indene	1.5 J	10	ug/L	SW846 8270C
1-Methylnaphthalene	32	10	ug/L	SW846 8270C
Phenanthrene	17	10	ug/L	SW846 8270C
W27-050809 05/08/09 13:45 010				
Acenaphthene	26	10	ug/L	SW846 8270C
Carbazole	2.1 J	10	ug/L	SW846 8270C
Dibenzofuran	9.0 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	13	10	ug/L	SW846 8270C
Fluorene	12	10	ug/L	SW846 8270C
Indene	2.9 J	10	ug/L	SW846 8270C
1-Methylnaphthalene	11	10	ug/L	SW846 8270C
W437-050809 05/08/09 15:00 011				
Acenaphthene	96	10	ug/L	SW846 8270C
Acridine	13	10	ug/L	SW846 8270C
Benzo(b)thiophene	39	10	ug/L	SW846 8270C
Biphenyl	27	10	ug/L	SW846 8270C
Carbazole	67	10	ug/L	SW846 8270C
Dibenzofuran	43	10	ug/L	SW846 8270C
2,3-Dihydroindene	61	10	ug/L	SW846 8270C
Fluorene	43	10	ug/L	SW846 8270C

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E110113

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W437-050809 05/08/09 15:00 011				
Indene	5.9 J	10	ug/L	SW846 8270C
2-Methylnaphthalene	99	10	ug/L	SW846 8270C
1-Methylnaphthalene	110	10	ug/L	SW846 8270C
Naphthalene	1900	400	ug/L	SW846 8270C
Phenanthrene	3.5 J	10	ug/L	SW846 8270C

METHODS SUMMARY

D9E110113

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9E110113

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Rhain Carpenter	000130
SW846 8270C SIM	Rhain Carpenter	000130

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9E110113

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LCQCJ	001	W422-050709	05/07/09	10:00
LCQC3	002	W428-050709	05/07/09	10:20
LCQC4	003	W128-050709	05/07/09	11:10
LCQDA	004	W421-050709	05/07/09	11:45
LCQDG	005	W431-050709	05/07/09	12:30
LCQDH	006	SLP4FEED-050709	05/07/09	14:00
LCQDL	007	SLP15FEED-050709	05/07/09	14:30
LCQDM	008	W426-050809	05/08/09	08:40
LCQDN	009	W120-050809	05/08/09	11:05
LCQDP	010	W27-050809	05/08/09	13:45
LCQDQ	011	W437-050809	05/08/09	15:00
LCQDV	012	W136-050709	05/07/09	16:10
LCQDW	013	P312-050709	05/07/09	17:05
LCQD0	014	W434-050709	05/07/09	17:15
LCQD1	015	W131-050709	05/07/09	15:05
LCQEK	016	W131DUP-050709	05/07/09	15:10
LCQEN	017	W131FB-050709	05/07/09	14:58
LCQER	018	W131FBD-050709	05/07/09	14:59

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W422-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-001 **Work Order #...:** LCQCJ1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 05/29/09
Prep Batch #...: 9132333 **Analysis Time..:** 23:31
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**7.1 J**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	74	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	68	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W428-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-002 **Work Order #...:** LCQC31AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 05/30/09
Prep Batch #...: 9132333 **Analysis Time..:** 00:06
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	60	(30 - 160)
Fluorene d-10	57	(36 - 127)
Naphthalene-d8	52	(37 - 107)

City of Saint Louis Park

Client Sample ID: W128-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-003 **Work Order #...:** LCQC41AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 05/30/09
Prep Batch #...: 9132333 **Analysis Time..:** 00:40
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	59	(30 - 160)
Fluorene d-10	59	(36 - 127)
Naphthalene-d8	55	(37 - 107)

City of Saint Louis Park

Client Sample ID: W421-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-004 **Work Order #...:** LCQDA1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 16:43
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**70**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	**3.8 J**	**10**	**ug/L**
Anthracene	**5.4 J**	**10**	**ug/L**
Benzo(a)anthracene	**4.6 J**	**10**	**ug/L**
Benzo(b)fluoranthene	**3.5 J**	**10**	**ug/L**
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	**2.4 J**	**10**	**ug/L**
Benzo(e)pyrene	**1.7 J**	**10**	**ug/L**
Benzo(b)thiophene	**22**	**10**	**ug/L**
Biphenyl	ND	10	ug/L
Carbazole	**41**	**10**	**ug/L**
Chrysene	**3.2 J**	**10**	**ug/L**
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**19**	**10**	**ug/L**
Dibenzothiophene	**5.7 J**	**10**	**ug/L**
2,3-Dihydroindene	**74**	**10**	**ug/L**
Fluoranthene	**21**	**10**	**ug/L**
Fluorene	**32**	**10**	**ug/L**
Indene	**22**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**20**	**10**	**ug/L**
1-Methylnaphthalene	**60**	**10**	**ug/L**
Naphthalene	**67**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**45**	**10**	**ug/L**
Pyrene	**15**	**10**	**ug/L**
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	73	(30 - 160)
Fluorene d-10	66	(36 - 127)
Naphthalene-d8	65	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W431-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-005 **Work Order #...:** LCQDG1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 17:17
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	75	(30 - 160)
Fluorene d-10	65	(36 - 127)
Naphthalene-d8	67	(37 - 107)

City of Saint Louis Park

Client Sample ID: W426-050809

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-008 **Work Order #...:** LCQDM1AA **Matrix.....:** WG
Date Sampled...: 05/08/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 17:51
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**41**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	**2.1 J**	**10**	**ug/L**
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**7.0 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**12**	**10**	**ug/L**
Dibenzothiophene	**1.8 J**	**10**	**ug/L**
2,3-Dihydroindene	**6.3 J**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**20**	**10**	**ug/L**
Indene	**1.5 J**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**32**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	**17**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	68	(30 - 160)
Fluorene d-10	62	(36 - 127)
Naphthalene-d8	47	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W120-050809

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-009 **Work Order #...:** LCQDN1AA **Matrix.....:** WG
Date Sampled...: 05/08/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 18:26
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(30 - 160)
Fluorene d-10	62	(36 - 127)
Naphthalene-d8	63	(37 - 107)

City of Saint Louis Park

Client Sample ID: W27-050809

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-010 **Work Order #...:** LCQDP1AA **Matrix.....:** WG
Date Sampled...: 05/08/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 19:00
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**26**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**2.1 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**9.0 J**	**10**	**ug/L**
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**13**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**12**	**10**	**ug/L**
Indene	**2.9 J**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**11**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	68	(30 - 160)
Fluorene d-10	61	(36 - 127)
Naphthalene-d8	55	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W437-050809

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-011 **Work Order #...:** LCQDQ1AA **Matrix.....:** WG
Date Sampled...: 05/08/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 19:35
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**96**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	**13**	**10**	**ug/L**
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**39**	**10**	**ug/L**
Biphenyl	**27**	**10**	**ug/L**
Carbazole	**67**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**43**	**10**	**ug/L**
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**61**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**43**	**10**	**ug/L**
Indene	**5.9 J**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**99**	**10**	**ug/L**
1-Methylnaphthalene	**110**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**3.5 J**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	76	(30 - 160)
Fluorene d-10	72	(36 - 127)
Naphthalene-d8	65	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W437-050809

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-011	**Work Order #...:** LCQDQ2AA	**Matrix.....:** WG	
Date Sampled...: 05/08/09	**Date Received..:** 05/09/09		
Prep Date.....: 05/12/09	**Analysis Date..:** 06/02/09		
Prep Batch #...: 9132333	**Analysis Time..:** 18:25		
Dilution Factor: 40			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**1900**	**400**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W136-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-012 **Work Order #...:** LCQDV1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 20:09
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	66	(30 - 160)
Fluorene d-10	65	(36 - 127)
Naphthalene-d8	67	(37 - 107)

City of Saint Louis Park

Client Sample ID: P312-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-013 **Work Order #...:** LCQDW1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 20:43
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	70	(30 - 160)
Fluorene d-10	63	(36 - 127)
Naphthalene-d8	58	(37 - 107)

City of Saint Louis Park

Client Sample ID: W434-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-014 **Work Order #...:** LCQD01AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 21:18
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	79	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	71	(37 - 107)

City of Saint Louis Park

Client Sample ID: W131-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-015 **Work Order #...:** LCQD11AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 21:52
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	73	(30 - 160)
Fluorene d-10	64	(36 - 127)
Naphthalene-d8	62	(37 - 107)

City of Saint Louis Park

Client Sample ID: W131DUP-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-016 **Work Order #...:** LCQEK1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 22:27
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	65	(30 - 160)
Fluorene d-10	64	(36 - 127)
Naphthalene-d8	62	(37 - 107)

City of Saint Louis Park

Client Sample ID: W131FB-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-017 **Work Order #...:** LCQEN1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 23:01
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	65	(36 - 127)
Naphthalene-d8	62	(37 - 107)

City of Saint Louis Park

Client Sample ID: W131FBD-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-018 **Work Order #...:** LCQER1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9132333 **Analysis Time..:** 23:36
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	83	(30 - 160)
Fluorene d-10	69	(36 - 127)
Naphthalene-d8	71	(37 - 107)

City of Saint Louis Park

Client Sample ID: SLP4FEED-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-006 **Work Order #...:** LCQDH1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/11/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9131150 **Analysis Time..:** 00:57
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**36**	**5.7**	**ng/L**
Acenaphthylene	**1.3 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**2.4 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**2.7 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**21**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**3.4 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.7 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**4.3**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	24 *	(28 - 101)
Fluorene d-10	42	(23 - 84)
Naphthalene-d8	45	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP15FEED-050709

GC/MS Semivolatiles

Lot-Sample #...: D9E110113-007 **Work Order #...:** LCQDL1AA **Matrix.....:** WG
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/11/09 **Analysis Date..:** 05/15/09
Prep Batch #...: 9131150 **Analysis Time..:** 01:34
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**110**	**5.7**	**ng/L**
Acenaphthylene	**8.0**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**1.1 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.2 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**1.2 J**	**5.7**	**ng/L**
Dibenzothiophene	**2.6 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**2.9 J**	**5.0**	**ng/L**
Fluoranthene	**3.5 J**	**4.6**	**ng/L**
Fluorene	**3.8 J**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	**5.3**	**4.7**	**ng/L**
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	**1.8 J**	**5.6**	**ng/L**
Naphthalene	**1.2 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**11**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	22 *	(28 - 101)
Fluorene d-10	40	(23 - 84)
Naphthalene-d8	41	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9E110113

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C		9132333	9132195
002	WG	SW846 8270C		9132333	9132195
003	WG	SW846 8270C		9132333	9132195
004	WG	SW846 8270C		9132333	9132195
005	WG	SW846 8270C		9132333	9132195
006	WG	SW846 8270C SIM		9131150	
007	WG	SW846 8270C SIM		9131150	
008	WG	SW846 8270C		9132333	9132195
009	WG	SW846 8270C		9132333	9132195
010	WG	SW846 8270C		9132333	9132195
011	WG	SW846 8270C		9132333	9132195
012	WG	SW846 8270C		9132333	9132195
013	WG	SW846 8270C		9132333	9132195
014	WG	SW846 8270C		9132333	9132195
015	WG	SW846 8270C		9132333	9132195
016	WG	SW846 8270C		9132333	9132195
017	WG	SW846 8270C		9132333	9132195
018	WG	SW846 8270C		9132333	9132195

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCT1C1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E120000-333

Prep Date.....: 05/12/09 **Analysis Time..:** 22:57
Analysis Date..: 05/29/09 **Prep Batch #...:** 9132333
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	81	(30 - 160)
Fluorene d-10	65	(36 - 127)
Naphthalene-d8	63	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 Work Order #...: LCT1C1AC Matrix.....: WATER
LCS Lot-Sample#: D9E120000-333
Prep Date.....: 05/12/09 Analysis Date..: 05/29/09
Prep Batch #...: 9132333 Analysis Time..: 20:34
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	74	(30 - 150)	SW846 8270C
Acenaphthylene	76	(30 - 150)	SW846 8270C
Acridine	81	(30 - 150)	SW846 8270C
Anthracene	82	(30 - 150)	SW846 8270C
Benzo(a)anthracene	89	(30 - 150)	SW846 8270C
Benzo(b)fluoranthene	77	(30 - 150)	SW846 8270C
Benzo(k)fluoranthene	85	(30 - 150)	SW846 8270C
7H-Dibenzo[c,g]carbazole	77	(30 - 150)	SW846 8270C
Dibenz(a,h)acridine	88	(30 - 150)	SW846 8270C
Dibenz(a,j)acridine	79	(30 - 150)	SW846 8270C
2,3-Benzofuran	70	(30 - 150)	SW846 8270C
Benzo(ghi)perylene	78	(30 - 150)	SW846 8270C
Dibenzo(a,e)pyrene	81	(30 - 150)	SW846 8270C
Dibenzo(a,i)pyrene	80	(30 - 150)	SW846 8270C
Dibenzo(a,h)pyrene	65	(30 - 150)	SW846 8270C
Dibenzo(a,l)pyrene	77	(30 - 150)	SW846 8270C
Benzo(a)pyrene	82	(30 - 150)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	61	(30 - 150)	SW846 8270C
2,6-Dimethylnaphthalene	71	(30 - 150)	SW846 8270C
Benzo(e)pyrene	85	(30 - 150)	SW846 8270C
3-Methylcholanthrene	76	(30 - 150)	SW846 8270C
Benzo(b)thiophene	73	(30 - 150)	SW846 8270C
6-Methylchrysene	84	(30 - 150)	SW846 8270C
1-Methylphenanthrene	79	(30 - 150)	SW846 8270C
Biphenyl	72	(30 - 150)	SW846 8270C
Carbazole	86	(30 - 150)	SW846 8270C
2,3,5-Trimethylnaphthalen	79	(30 - 150)	SW846 8270C
Chrysene	87	(43 - 124)	SW846 8270C
Dibenzo(a,h)anthracene	81	(30 - 150)	SW846 8270C
Dibenzofuran	79	(30 - 150)	SW846 8270C
Dibenzothiophene	84	(30 - 150)	SW846 8270C
2,3-Dihydroindene	57	(30 - 150)	SW846 8270C
Fluoranthene	83	(30 - 150)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCT1C1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E120000-333

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**79**	**(51 - 120)**	**SW846 8270C**
Indene	**66**	**(49 - 108)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**79**	**(30 - 150)**	**SW846 8270C**
Indole	**77**	**(30 - 150)**	**SW846 8270C**
2-Methylnaphthalene	**64**	**(47 - 138)**	**SW846 8270C**
1-Methylnaphthalene	**65**	**(30 - 150)**	**SW846 8270C**
Naphthalene	**69**	**(43 - 128)**	**SW846 8270C**
Perylene	**81**	**(30 - 150)**	**SW846 8270C**
Phenanthrene	**82**	**(30 - 150)**	**SW846 8270C**
Pyrene	**83**	**(30 - 150)**	**SW846 8270C**
Quinoline	**80**	**(40 - 126)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	71	(36 - 127)
Naphthalene-d8	70	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCT1C1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E120000-333
Prep Date.....: 05/12/09 **Analysis Date..:** 05/29/09
Prep Batch #...: 9132333 **Analysis Time..:** 20:34
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	50.0	36.8	ug/L	74	SW846 8270C
Acenaphthylene	50.0	38.0	ug/L	76	SW846 8270C
Acridine	50.0	40.6	ug/L	81	SW846 8270C
Anthracene	50.0	40.8	ug/L	82	SW846 8270C
Benzo(a)anthracene	50.0	44.4	ug/L	89	SW846 8270C
Benzo(b)fluoranthene	50.0	38.7	ug/L	77	SW846 8270C
Benzo(k)fluoranthene	50.0	42.7	ug/L	85	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	38.3	ug/L	77	SW846 8270C
Dibenz(a,h)acridine	50.0	43.8	ug/L	88	SW846 8270C
Dibenz(a,j)acridine	50.0	39.6	ug/L	79	SW846 8270C
2,3-Benzofuran	50.0	35.2	ug/L	70	SW846 8270C
Benzo(ghi)perylene	50.0	38.8	ug/L	78	SW846 8270C
Dibenzo(a,e)pyrene	50.0	40.7	ug/L	81	SW846 8270C
Dibenzo(a,i)pyrene	50.0	40.0	ug/L	80	SW846 8270C
Dibenzo(a,h)pyrene	50.0	32.5	ug/L	65	SW846 8270C
Dibenzo(a,l)pyrene	50.0	38.3	ug/L	77	SW846 8270C
Benzo(a)pyrene	50.0	41.0	ug/L	82	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	30.3	ug/L	61	SW846 8270C
2,6-Dimethylnaphthalene	50.0	35.6	ug/L	71	SW846 8270C
Benzo(e)pyrene	50.0	42.4	ug/L	85	SW846 8270C
3-Methylcholanthrene	50.0	38.1	ug/L	76	SW846 8270C
Benzo(b)thiophene	50.0	36.4	ug/L	73	SW846 8270C
6-Methylchrysene	50.0	41.9	ug/L	84	SW846 8270C
1-Methylphenanthrene	50.0	39.4	ug/L	79	SW846 8270C
Biphenyl	50.0	36.1	ug/L	72	SW846 8270C
Carbazole	50.0	43.2	ug/L	86	SW846 8270C
2,3,5-Trimethylnaphthalen	50.0	39.7	ug/L	79	SW846 8270C
Chrysene	50.0	43.5	ug/L	87	SW846 8270C
Dibenzo(a,h)anthracene	50.0	40.3	ug/L	81	SW846 8270C
Dibenzofuran	50.0	39.3	ug/L	79	SW846 8270C
Dibenzothiophene	50.0	41.8	ug/L	84	SW846 8270C
2,3-Dihydroindene	50.0	28.7	ug/L	57	SW846 8270C
Fluoranthene	50.0	41.4	ug/L	83	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCT1C1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E120000-333

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**50.0**	**39.3**	**ug/L**	**79**	**SW846 8270C**
Indene	**50.0**	**32.9**	**ug/L**	**66**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**50.0**	**39.3**	**ug/L**	**79**	**SW846 8270C**
Indole	**50.0**	**38.6**	**ug/L**	**77**	**SW846 8270C**
2-Methylnaphthalene	**50.0**	**32.1**	**ug/L**	**64**	**SW846 8270C**
1-Methylnaphthalene	**50.0**	**32.6**	**ug/L**	**65**	**SW846 8270C**
Naphthalene	**50.0**	**34.7**	**ug/L**	**69**	**SW846 8270C**
Perylene	**50.0**	**40.6**	**ug/L**	**81**	**SW846 8270C**
Phenanthrene	**50.0**	**40.8**	**ug/L**	**82**	**SW846 8270C**
Pyrene	**50.0**	**41.4**	**ug/L**	**83**	**SW846 8270C**
Quinoline	**50.0**	**40.2**	**ug/L**	**80**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	71	(36 - 127)
Naphthalene-d8	70	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCQD01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E110113-014 LCQD01AD-MSD
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 05/29/09
Prep Batch #...: 9132333 **Analysis Time..:** 21:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	71	(30 - 150)			SW846 8270C
	67	(30 - 150)	5.7	(0-30)	SW846 8270C
Acenaphthylene	70	(30 - 150)			SW846 8270C
	66	(30 - 150)	5.6	(0-30)	SW846 8270C
Acridine	83	(30 - 150)			SW846 8270C
	80	(30 - 150)	3.6	(0-30)	SW846 8270C
Anthracene	82	(30 - 150)			SW846 8270C
	81	(30 - 150)	0.80	(0-30)	SW846 8270C
Benzo(a)anthracene	89	(30 - 150)			SW846 8270C
	87	(30 - 150)	1.7	(0-30)	SW846 8270C
Benzo(b)fluoranthene	78	(30 - 150)			SW846 8270C
	78	(30 - 150)	0.43	(0-30)	SW846 8270C
Benzo(k)fluoranthene	85	(30 - 150)			SW846 8270C
	82	(30 - 150)	2.8	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	79	(30 - 150)			SW846 8270C
	78	(30 - 150)	2.0	(0-30)	SW846 8270C
Dibenz(a,h)acridine	89	(30 - 150)			SW846 8270C
	88	(30 - 150)	0.69	(0-30)	SW846 8270C
Dibenz(a,j)acridine	81	(30 - 150)			SW846 8270C
	81	(30 - 150)	0.18	(0-30)	SW846 8270C
2,3-Benzofuran	60	(30 - 150)			SW846 8270C
	60	(30 - 150)	0.07	(0-30)	SW846 8270C
Benzo(ghi)perylene	79	(30 - 150)			SW846 8270C
	79	(30 - 150)	0.88	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	82	(30 - 150)			SW846 8270C
	82	(30 - 150)	0.05	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	81	(30 - 150)			SW846 8270C
	81	(30 - 150)	0.23	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	69	(30 - 150)			SW846 8270C
	77	(30 - 150)	11	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	78	(30 - 150)			SW846 8270C
	76	(30 - 150)	2.7	(0-30)	SW846 8270C
Benzo(a)pyrene	83	(30 - 150)			SW846 8270C
	83	(30 - 150)	0.96	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	57	(30 - 150)			SW846 8270C
	47	(30 - 150)	19	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	64	(30 - 150)			SW846 8270C
	59	(30 - 150)	9.1	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCQD01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E110113-014 LCQD01AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	86	(30 - 150)			SW846 8270C
	84	(30 - 150)	1.5	(0-30)	SW846 8270C
Benzo(b)thiophene	64	(30 - 150)			SW846 8270C
	61	(30 - 150)	4.5	(0-30)	SW846 8270C
3-Methylcholanthrene	83	(30 - 150)			SW846 8270C
	82	(30 - 150)	1.7	(0-30)	SW846 8270C
6-Methylchrysene	84	(30 - 150)			SW846 8270C
	82	(30 - 150)	1.5	(0-30)	SW846 8270C
1-Methylphenanthrene	80	(30 - 150)			SW846 8270C
	79	(30 - 150)	1.7	(0-30)	SW846 8270C
Biphenyl	65	(30 - 150)			SW846 8270C
	60	(30 - 150)	8.1	(0-30)	SW846 8270C
Carbazole	87	(30 - 150)			SW846 8270C
	87	(30 - 150)	0.90	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	74	(30 - 150)			SW846 8270C
	73	(30 - 150)	1.8	(0-30)	SW846 8270C
Chrysene	85	(43 - 124)			SW846 8270C
	84	(43 - 124)	1.1	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	82	(30 - 150)			SW846 8270C
	81	(30 - 150)	1.4	(0-30)	SW846 8270C
Dibenzofuran	74	(30 - 150)			SW846 8270C
	71	(30 - 150)	3.5	(0-30)	SW846 8270C
Dibenzothiophene	84	(30 - 150)			SW846 8270C
	83	(30 - 150)	0.89	(0-30)	SW846 8270C
2,3-Dihydroindene	55	(30 - 150)			SW846 8270C
	53	(30 - 150)	3.6	(0-30)	SW846 8270C
Fluoranthene	85	(30 - 150)			SW846 8270C
	84	(30 - 150)	1.2	(0-30)	SW846 8270C
Fluorene	74	(51 - 120)			SW846 8270C
	74	(51 - 120)	1.1	(0-30)	SW846 8270C
Indene	58	(49 - 108)			SW846 8270C
	57	(49 - 108)	1.5	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	81	(30 - 150)			SW846 8270C
	80	(30 - 150)	1.6	(0-30)	SW846 8270C
Indole	63	(30 - 150)			SW846 8270C
	64	(30 - 150)	1.6	(0-30)	SW846 8270C
2-Methylnaphthalene	58	(47 - 138)			SW846 8270C
	52	(47 - 138)	10	(0-30)	SW846 8270C
1-Methylnaphthalene	58	(30 - 150)			SW846 8270C
	53	(30 - 150)	9.5	(0-30)	SW846 8270C
Naphthalene	61	(43 - 128)			SW846 8270C
	58	(43 - 128)	5.7	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCQD01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E110113-014 LCQD01AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**82**	**(30 - 150)**			**SW846 8270C**
	81	**(30 - 150)**	**0.98**	**(0-30)**	**SW846 8270C**
Phenanthrene	**81**	**(30 - 150)**			**SW846 8270C**
	81	**(30 - 150)**	**0.49**	**(0-30)**	**SW846 8270C**
Pyrene	**84**	**(30 - 150)**			**SW846 8270C**
	83	**(30 - 150)**	**1.1**	**(0-30)**	**SW846 8270C**
Quinoline	**73**	**(40 - 126)**			**SW846 8270C**
	78	**(40 - 126)**	**6.0**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	77	(30 - 160)
	76	(30 - 160)
Fluorene d-10	68	(36 - 127)
	69	(36 - 127)
Naphthalene-d8	65	(37 - 107)
	66	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCQD01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E110113-014 LCQD01AD-MSD
Date Sampled...: 05/07/09 **Date Received..:** 05/09/09
Prep Date.....: 05/12/09 **Analysis Date..:** 05/29/09
Prep Batch #...: 9132333 **Analysis Time..:** 21:14
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	47.3	33.3	ug/L	71		SW846 8270C
	ND	47.2	31.5	ug/L	67	5.7	SW846 8270C
Acenaphthylene	ND	47.3	32.9	ug/L	70		SW846 8270C
	ND	47.2	31.1	ug/L	66	5.6	SW846 8270C
Acridine	ND	47.3	39.3	ug/L	83		SW846 8270C
	ND	47.2	37.9	ug/L	80	3.6	SW846 8270C
Anthracene	ND	47.3	38.6	ug/L	82		SW846 8270C
	ND	47.2	38.2	ug/L	81	0.80	SW846 8270C
Benzo(a)anthracene	ND	47.3	42.0	ug/L	89		SW846 8270C
	ND	47.2	41.3	ug/L	87	1.7	SW846 8270C
Benzo(b)fluoranthene	ND	47.3	36.9	ug/L	78		SW846 8270C
	ND	47.2	37.0	ug/L	78	0.43	SW846 8270C
Benzo(k)fluoranthene	ND	47.3	40.0	ug/L	85		SW846 8270C
	ND	47.2	38.9	ug/L	82	2.8	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.3	37.5	ug/L	79		SW846 8270C
	ND	47.2	36.8	ug/L	78	2.0	SW846 8270C
Dibenz(a,h)acridine	ND	47.3	41.8	ug/L	89		SW846 8270C
	ND	47.2	41.6	ug/L	88	0.69	SW846 8270C
Dibenz(a,j)acridine	ND	47.3	38.3	ug/L	81		SW846 8270C
	ND	47.2	38.2	ug/L	81	0.18	SW846 8270C
2,3-Benzofuran	ND	47.3	28.4	ug/L	60		SW846 8270C
	ND	47.2	28.5	ug/L	60	0.07	SW846 8270C
Benzo(ghi)perylene	ND	47.3	37.6	ug/L	79		SW846 8270C
	ND	47.2	37.2	ug/L	79	0.88	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.3	38.9	ug/L	82		SW846 8270C
	ND	47.2	38.9	ug/L	82	0.05	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.3	38.3	ug/L	81		SW846 8270C
	ND	47.2	38.4	ug/L	81	0.23	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.3	32.6	ug/L	69		SW846 8270C
	ND	47.2	36.4	ug/L	77	11	SW846 8270C
Dibenzo(a,l)pyrene	ND	47.3	36.9	ug/L	78		SW846 8270C
	ND	47.2	36.0	ug/L	76	2.7	SW846 8270C
Benzo(a)pyrene	ND	47.3	39.5	ug/L	83		SW846 8270C
	ND	47.2	39.1	ug/L	83	0.96	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.3	26.9	ug/L	57		SW846 8270C
	ND	47.2	22.3	ug/L	47	19	SW846 8270C
2,6-Dimethylnaphthalene	ND	47.3	30.3	ug/L	64		SW846 8270C
	ND	47.2	27.6	ug/L	59	9.1	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCQD01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E110113-014 LCQD01AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.3	40.5	ug/L	86		SW846 8270C
	ND	47.2	39.8	ug/L	84	1.5	SW846 8270C
Benzo(b)thiophene	ND	47.3	30.2	ug/L	64		SW846 8270C
	ND	47.2	28.9	ug/L	61	4.5	SW846 8270C
3-Methylcholanthrene	ND	47.3	39.3	ug/L	83		SW846 8270C
	ND	47.2	38.6	ug/L	82	1.7	SW846 8270C
6-Methylchrysene	ND	47.3	39.5	ug/L	84		SW846 8270C
	ND	47.2	38.9	ug/L	82	1.5	SW846 8270C
1-Methylphenanthrene	ND	47.3	37.8	ug/L	80		SW846 8270C
	ND	47.2	37.2	ug/L	79	1.7	SW846 8270C
Biphenyl	ND	47.3	30.8	ug/L	65		SW846 8270C
	ND	47.2	28.4	ug/L	60	8.1	SW846 8270C
Carbazole	ND	47.3	41.3	ug/L	87		SW846 8270C
	ND	47.2	40.9	ug/L	87	0.90	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	47.3	35.1	ug/L	74		SW846 8270C
	ND	47.2	34.5	ug/L	73	1.8	SW846 8270C
Chrysene	ND	47.3	40.2	ug/L	85		SW846 8270C
	ND	47.2	39.8	ug/L	84	1.1	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.3	38.9	ug/L	82		SW846 8270C
	ND	47.2	38.3	ug/L	81	1.4	SW846 8270C
Dibenzofuran	ND	47.3	34.8	ug/L	74		SW846 8270C
	ND	47.2	33.6	ug/L	71	3.5	SW846 8270C
Dibenzothiophene	ND	47.3	39.5	ug/L	84		SW846 8270C
	ND	47.2	39.1	ug/L	83	0.89	SW846 8270C
2,3-Dihydroindene	ND	47.3	25.8	ug/L	55		SW846 8270C
	ND	47.2	24.9	ug/L	53	3.6	SW846 8270C
Fluoranthene	ND	47.3	40.0	ug/L	85		SW846 8270C
	ND	47.2	39.5	ug/L	84	1.2	SW846 8270C
Fluorene	ND	47.3	35.1	ug/L	74		SW846 8270C
	ND	47.2	34.7	ug/L	74	1.1	SW846 8270C
Indene	ND	47.3	27.4	ug/L	58		SW846 8270C
	ND	47.2	27.0	ug/L	57	1.5	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.3	38.4	ug/L	81		SW846 8270C
	ND	47.2	37.8	ug/L	80	1.6	SW846 8270C
Indole	ND	47.3	29.8	ug/L	63		SW846 8270C
	ND	47.2	30.3	ug/L	64	1.6	SW846 8270C
2-Methylnaphthalene	ND	47.3	27.3	ug/L	58		SW846 8270C
	ND	47.2	24.6	ug/L	52	10	SW846 8270C
1-Methylnaphthalene	ND	47.3	27.4	ug/L	58		SW846 8270C
	ND	47.2	25.0	ug/L	53	9.5	SW846 8270C
Naphthalene	ND	47.3	29.0	ug/L	61		SW846 8270C
	ND	47.2	27.4	ug/L	58	5.7	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCQD01AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E110113-014 LCQD01AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**47.3**	**38.7**	**ug/L**	**82**		**SW846 8270C**
	ND	**47.2**	**38.3**	**ug/L**	**81**	**0.98**	**SW846 8270C**
Phenanthrene	**ND**	**47.3**	**38.4**	**ug/L**	**81**		**SW846 8270C**
	ND	**47.2**	**38.2**	**ug/L**	**81**	**0.49**	**SW846 8270C**
Pyrene	**ND**	**47.3**	**39.9**	**ug/L**	**84**		**SW846 8270C**
	ND	**47.2**	**39.4**	**ug/L**	**83**	**1.1**	**SW846 8270C**
Quinoline	**ND**	**47.3**	**34.4**	**ug/L**	**73**		**SW846 8270C**
	ND	**47.2**	**36.6**	**ug/L**	**78**	**6.0**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	77	(30 - 160)
	76	(30 - 160)
Fluorene d-10	68	(36 - 127)
	69	(36 - 127)
Naphthalene-d8	65	(37 - 107)
	66	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCP7L1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E110000-150

Prep Date.....: 05/11/09 **Analysis Time..:** 17:33
Analysis Date..: 05/14/09 **Prep Batch #...:** 9131150
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	46	(28 - 101)
Fluorene d-10	37	(23 - 84)
Naphthalene-d8	47	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD
Prep Date.....: 05/11/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9131150 **Analysis Time..:** 18:10
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	61	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.4	(0-50)	SW846 8270C SIM
Acenaphthylene	43	(30 - 150)			SW846 8270C SIM
	42	(30 - 150)	2.3	(0-50)	SW846 8270C SIM
Acridine	27 a	(30 - 150)			SW846 8270C SIM
	21 a	(30 - 150)	26	(0-50)	SW846 8270C SIM
Anthracene	45	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	1.5	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	48	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	5.0	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	65	(30 - 150)			SW846 8270C SIM
	62	(30 - 150)	5.2	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	68	(30 - 150)			SW846 8270C SIM
	65	(30 - 150)	5.9	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	45	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	5.6	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	49	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	1.3	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	41	(30 - 150)			SW846 8270C SIM
	32	(30 - 150)	23	(0-50)	SW846 8270C SIM
2,3-Benzofuran	60	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.4	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	56	(30 - 150)			SW846 8270C SIM
	59	(30 - 150)	4.0	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	35	(30 - 150)			SW846 8270C SIM
	38	(30 - 150)	10	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	25 a	(30 - 150)			SW846 8270C SIM
	29 a	(30 - 150)	18	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	8.6 a	(30 - 150)			SW846 8270C SIM
	16 a,p	(30 - 150)	60	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	27 a	(30 - 150)			SW846 8270C SIM
	32	(30 - 150)	18	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	52	(30 - 150)			SW846 8270C SIM
	53	(30 - 150)	1.3	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	38	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	23	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	59	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	4.6	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	65	(37 - 105)			SW846 8270C SIM
	61	(37 - 105)	5.8	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	61	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	5.1	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	24 a	(30 - 150)			SW846 8270C SIM
	37	(30 - 150)	44	(0-50)	SW846 8270C SIM
6-Methylchrysene	47	(30 - 150)			SW846 8270C SIM
	47	(30 - 150)	0.16	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	50	(30 - 150)			SW846 8270C SIM
	47	(30 - 150)	5.9	(0-50)	SW846 8270C SIM
Biphenyl	64	(30 - 150)			SW846 8270C SIM
	61	(30 - 150)	4.8	(0-50)	SW846 8270C SIM
Carbazole	58	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	5.2	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	48	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	4.8	(0-50)	SW846 8270C SIM
Chrysene	64	(20 - 136)			SW846 8270C SIM
	63	(20 - 136)	1.7	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	50	(30 - 150)			SW846 8270C SIM
	50	(30 - 150)	0.10	(0-50)	SW846 8270C SIM
Dibenzofuran	67	(30 - 150)			SW846 8270C SIM
	64	(30 - 150)	5.2	(0-50)	SW846 8270C SIM
Dibenzothiophene	59	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	5.9	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	59	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	5.0	(0-50)	SW846 8270C SIM
Fluoranthene	50	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	3.8	(0-50)	SW846 8270C SIM
Fluorene	53	(34 - 96)			SW846 8270C SIM
	51	(34 - 96)	5.7	(0-50)	SW846 8270C SIM
Indene	57	(22 - 86)			SW846 8270C SIM
	55	(22 - 86)	3.4	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	49	(30 - 150)			SW846 8270C SIM
	51	(30 - 150)	4.9	(0-50)	SW846 8270C SIM
Indole	52	(30 - 150)			SW846 8270C SIM
	53	(30 - 150)	1.0	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	61	(25 - 95)			SW846 8270C SIM
	58	(25 - 95)	4.7	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	61	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	4.4	(0-50)	SW846 8270C SIM
Naphthalene	62	(27 - 95)			SW846 8270C SIM
	58	(27 - 95)	5.2	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**57**	**(30 - 150)**			**SW846 8270C SIM**
	58	**(30 - 150)**	**2.0**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**63**	**(30 - 150)**			**SW846 8270C SIM**
	59	**(30 - 150)**	**5.4**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**49**	**(30 - 150)**			**SW846 8270C SIM**
	47	**(30 - 150)**	**4.6**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**52**	**(20 - 112)**			**SW846 8270C SIM**
	51	**(20 - 112)**	**0.18**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	60	(28 - 101)
	58	(28 - 101)
Fluorene d-10	50	(23 - 84)
	48	(23 - 84)
Naphthalene-d8	59	(22 - 97)
	57	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD
Prep Date.....: 05/11/09 **Analysis Date..:** 05/14/09
Prep Batch #...: 9131150 **Analysis Time..:** 18:10
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	75.0	45.6	ng/L	61		SW846 8270C SIM
	75.0	43.6	ng/L	58	4.4	SW846 8270C SIM
Acenaphthylene	75.0	32.6	ng/L	43		SW846 8270C SIM
	75.0	31.9	ng/L	42	2.3	SW846 8270C SIM
Acridine	75.0	20.0 a	ng/L	27		SW846 8270C SIM
	75.0	15.5 a	ng/L	21	26	SW846 8270C SIM
Anthracene	75.0	33.8	ng/L	45		SW846 8270C SIM
	75.0	34.4	ng/L	46	1.5	SW846 8270C SIM
Benzo(a)anthracene	75.0	36.1	ng/L	48		SW846 8270C SIM
	75.0	34.3	ng/L	46	5.0	SW846 8270C SIM
Benzo(b)fluoranthene	75.0	48.9	ng/L	65		SW846 8270C SIM
	75.0	46.4	ng/L	62	5.2	SW846 8270C SIM
Benzo(k)fluoranthene	75.0	51.3	ng/L	68		SW846 8270C SIM
	75.0	48.4	ng/L	65	5.9	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	75.0	33.9	ng/L	45		SW846 8270C SIM
	75.0	32.0	ng/L	43	5.6	SW846 8270C SIM
Dibenz(a,h)acridine	75.0	36.5	ng/L	49		SW846 8270C SIM
	75.0	36.0	ng/L	48	1.3	SW846 8270C SIM
Dibenz(a,j)acridine	75.0	30.7	ng/L	41		SW846 8270C SIM
	75.0	24.4	ng/L	32	23	SW846 8270C SIM
2,3-Benzofuran	75.0	45.2	ng/L	60		SW846 8270C SIM
	75.0	43.3	ng/L	58	4.4	SW846 8270C SIM
Benzo(ghi)perylene	75.0	42.2	ng/L	56		SW846 8270C SIM
	75.0	43.9	ng/L	59	4.0	SW846 8270C SIM
Dibenzo(a,e)pyrene	75.0	26.0	ng/L	35		SW846 8270C SIM
	75.0	28.7	ng/L	38	10	SW846 8270C SIM
Dibenzo(a,i)pyrene	75.0	18.4 a	ng/L	25		SW846 8270C SIM
	75.0	22.0 a	ng/L	29	18	SW846 8270C SIM
Dibenzo(a,h)pyrene	75.0	6.44 a	ng/L	8.6		SW846 8270C SIM
	75.0	12.0 a,p	ng/L	16	60	SW846 8270C SIM
Dibenzo(a,l)pyrene	75.0	20.2 a	ng/L	27		SW846 8270C SIM
	75.0	24.2	ng/L	32	18	SW846 8270C SIM
Benzo(a)pyrene	75.0	39.0	ng/L	52		SW846 8270C SIM
	75.0	39.5	ng/L	53	1.3	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	75.0	28.4	ng/L	38		SW846 8270C SIM
	75.0	35.9	ng/L	48	23	SW846 8270C SIM
2,6-Dimethylnaphthalene	75.0	43.9	ng/L	59		SW846 8270C SIM
	75.0	41.9	ng/L	56	4.6	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzo(e)pyrene	75.0	48.7	ng/L	65		SW846 8270C SIM
	75.0	45.9	ng/L	61	5.8	SW846 8270C SIM
Benzo(b)thiophene	75.0	46.0	ng/L	61		SW846 8270C SIM
	75.0	43.7	ng/L	58	5.1	SW846 8270C SIM
3-Methylcholanthrene	75.0	17.9 a	ng/L	24		SW846 8270C SIM
	75.0	28.1	ng/L	37	44	SW846 8270C SIM
6-Methylchrysene	75.0	35.5	ng/L	47		SW846 8270C SIM
	75.0	35.6	ng/L	47	0.16	SW846 8270C SIM
1-Methylphenanthrene	75.0	37.7	ng/L	50		SW846 8270C SIM
	75.0	35.6	ng/L	47	5.9	SW846 8270C SIM
Biphenyl	75.0	48.0	ng/L	64		SW846 8270C SIM
	75.0	45.8	ng/L	61	4.8	SW846 8270C SIM
Carbazole	75.0	43.3	ng/L	58		SW846 8270C SIM
	75.0	41.1	ng/L	55	5.2	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	75.0	35.9	ng/L	48		SW846 8270C SIM
	75.0	34.2	ng/L	46	4.8	SW846 8270C SIM
Chrysene	75.0	48.0	ng/L	64		SW846 8270C SIM
	75.0	47.2	ng/L	63	1.7	SW846 8270C SIM
Dibenzo(a,h)anthracene	75.0	37.7	ng/L	50		SW846 8270C SIM
	75.0	37.6	ng/L	50	0.10	SW846 8270C SIM
Dibenzofuran	75.0	50.5	ng/L	67		SW846 8270C SIM
	75.0	47.9	ng/L	64	5.2	SW846 8270C SIM
Dibenzothiophene	75.0	44.0	ng/L	59		SW846 8270C SIM
	75.0	41.5	ng/L	55	5.9	SW846 8270C SIM
2,3-Dihydroindene	75.0	44.2	ng/L	59		SW846 8270C SIM
	75.0	42.0	ng/L	56	5.0	SW846 8270C SIM
Fluoranthene	75.0	37.2	ng/L	50		SW846 8270C SIM
	75.0	35.8	ng/L	48	3.8	SW846 8270C SIM
Fluorene	75.0	40.1	ng/L	53		SW846 8270C SIM
	75.0	37.9	ng/L	51	5.7	SW846 8270C SIM
Indene	75.0	42.4	ng/L	57		SW846 8270C SIM
	75.0	41.0	ng/L	55	3.4	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	75.0	36.6	ng/L	49		SW846 8270C SIM
	75.0	38.4	ng/L	51	4.9	SW846 8270C SIM
Indole	75.0	39.0	ng/L	52		SW846 8270C SIM
	75.0	39.4	ng/L	53	1.0	SW846 8270C SIM
2-Methylnaphthalene	75.0	45.5	ng/L	61		SW846 8270C SIM
	75.0	43.4	ng/L	58	4.7	SW846 8270C SIM
1-Methylnaphthalene	75.0	45.4	ng/L	61		SW846 8270C SIM
	75.0	43.4	ng/L	58	4.4	SW846 8270C SIM
Naphthalene	75.0	46.2	ng/L	62		SW846 8270C SIM
	75.0	43.8	ng/L	58	5.2	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E110113 **Work Order #...:** LCP7L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E110000-150 LCP7L1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Perylene	**75.0**	**42.7**	**ng/L**	**57**		**SW846 8270C SIM**
	75.0	**43.5**	**ng/L**	**58**	**2.0**	**SW846 8270C SIM**
Phenanthrene	**75.0**	**46.9**	**ng/L**	**63**		**SW846 8270C SIM**
	75.0	**44.4**	**ng/L**	**59**	**5.4**	**SW846 8270C SIM**
Pyrene	**75.0**	**36.5**	**ng/L**	**49**		**SW846 8270C SIM**
	75.0	**34.9**	**ng/L**	**47**	**4.6**	**SW846 8270C SIM**
Quinoline	**75.0**	**38.7**	**ng/L**	**52**		**SW846 8270C SIM**
	75.0	**38.6**	**ng/L**	**51**	**0.18**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	60	(28 - 101)
	58	(28 - 101)
Fluorene d-10	50	(23 - 84)
	48	(23 - 84)
Naphthalene-d8	59	(22 - 97)
	57	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St Louis Park	Project Manager: Scott Anderson	Date: 5/8/2009	Chain of Custody Number: 150797
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 1 of 2
City: St Louis Park / State: MN / Zip Code: 55416	Site Contact: A. Tarara	Lab Contact: Lisa Uriell	
Project Name and Location (State): Reilly (MN)	Carrier/Waybill Number: Fed Ex/8692 6052 5231		
Contract/Purchase Order/Quote No.: 01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: PAH/PPB	PAH/PPB	Special Instructions/ Conditions of Receipt
W422-050709	050709	1000		X			2						X		
W428-050709		1020											X		
W128-050709		1110											X		
W421-050709		1145											X		
W431-050709		1230					✓						X		
SLP4 Feed-050709		1400					6							X	
SLP15 Feed-050709	↓	1430					6							X	
W426-050809	050809	0840					2						X		
W120-050809		1105					2						X		
W27-050809		1345					2						X		
W437-050809	↓	1500		✓			2						X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	5/8/09	1630	1. Received By	5/9/9	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

4.1 A6
3.5 IR1
3.8 5/9/9
3.1

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St Louis Park	Project Manager: Scott Anderson	Date: 05/08/2009	Chain of Custody Number: 150782
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 2 of 2
City: St Louis Park; State: MN; Zip Code: 55416	Site Contact: D. Tarara	Lab Contact: Lisa Uriell	
Project Name and Location (State): Reilly (MN)	Carrier/Waybill Number: FedEx / 8692 6052 5231		
Contract/Purchase Order/Quote No.: 01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PRB	Special Instructions/ Conditions of Receipt
W136-050709	05/07/09	1610		X			2						X	
P312-050709	05/07/09	1705		X			2						X	
W434-050709	05/07/09	1715		X			2						X	
W434MS-050709	05/07/09	1720		X			2						X	Matrix Spike
W434MSD-050709	05/07/09	1725		X			2						X	Matrix Spike Dup
W131-050709	05/07/09	1505		X			2						X	
W131DUP-050709	05/07/09	1510		X			2						X	
W131FB-050709	05/07/09	1458		X			2						X	
W131FBD-050709	05/07/09	1459		X			2						X	

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [ ] 14 Days [ ] 21 Days [ ] Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	5/8/09	1630	1. Received By	5/9/9	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9E110113 Date/Time Received: _____

Company Name & Sampling Site: City of St Louis Park

PM to Complete This Section: Yes ☐ No ☒ Quarantined: Yes ☐ No ☒

Residual chlorine check required: ☐

Quote #: 34743

* Return coolers Priority Overnight to address attached *

Special Instructions:

- PPt PAHs use Protocol B (6L)
- PPb PAHs use Protocol C (2L)
- Log "FBD" test code for samples w/ "FBD" in sample ID

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 4

Temperatures (°C): 4.1°C 3.5°C 3.9°C 3.1°C

N/A	Yes	No		Initials
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	CMF
	☑	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No: ____	
	☑	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☑	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☑	5. Multiphasic samples obvious? If yes, document on CUR.	
	☑	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☑	☐	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☑	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☑	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☑	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☑	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☑	12. Did samples require preservation with sodium thiosulfate?	
☑	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☑	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☑	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☑	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☑	17. Are analyses with short holding times requested?	
	☐	☑	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9F110113

Login Checks:

Initials CHK

N/A	*Yes*	*No*		
	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003)	If no, document on CUR, and contact PM before proceeding.
☐	☑	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates?	If no, document on CUR, and contact PM before proceeding.
	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed?	All
☑	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

Initials [signature]

☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?
	☑	☐	29. Were sample labels double-checked by a second person?
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?
☑	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27
☑	☐	☐	33. Were AFCEE metals stored refrigerated?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

AECOM Environment
FNBB 332 Minnesota Street Suite E1000 St. Paul, MN 55101
T 651.222.0841 F 651.222.8914 www.aecom.com

Memorandum

Date: March 8, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9E110113
Appendix F

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of 16 aqueous samples and two field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C SIM and parts per billion (ppb) analysis by 8270C. The samples were collected on May 7-8, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9E110113.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W422-050709	W428-050709
W128-050709	W421-050709
W431-050709	SLP4FEED-050709
SLP15FEED-050709	W426-050809
W120-050809	W27-050809

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Sample IDs	Sample IDs
W437-050809	W136-050709
P312-050709	W434-050709
W131-050709	W131DUP-050709
W131FB-050709	W131FBD-050709

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blanks 9132333 and 9131150 or field blanks W131FB-050709 and W131FBD-050709.

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses with the exception of two samples. The surrogate percent recovery outside (below) the acceptance criteria was chrysene-d12 in each case. No action was required since the remaining two base/neutral surrogates were within QC recovery limits.

AECOM

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MS/MSD Results

MS/MSD analyses were performed on sample W434-050709. All target compounds were spiked for the MS/MSD analyses. All recoveries were within the acceptance criteria.

LCS Results

Recoveries for LCS 9132333 were within the control limits. The following table summarizes the %Rs that fell below the QC acceptance criteria for the LCS analysis (9131150).

Compound	%R (RPD)	QC Limits (RPD Limits)	Actions	
			Detects	Nondetects
Acridine (LCS)	27	30-150	J	UJ
Acridine (LCSD)	21	30-150	J	UJ
Dibenzo (a,i) pyrene (LCS)	25	30-150	J	UJ
Dibenzo(a,i)pyrene (LCSD)	29	30-150	J	UJ
Dibenzo (a,h) pyrene (LCS)	8.6	30-150	J	UJ
Dibenzo(a,h)pyrene(LCSD)	16	30-150	J	UJ
Dibenzo(a,l)pyrene(LCS)	27	30-150	J	UJ
3-Methylcholanthrene(LCS)	24	30-150	J	UJ
Associated samples: SLP4FEED-050709 and SLP15FEED-050709				

Field Duplicate Results

Samples W131-050709 and W131DUP-050709 were the field duplicate pairs analyzed with this data set.

A total of 0 of 31 compounds were detected in the two samples.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Sample W437-050809 was initially analyzed undiluted. The results of some compounds fell outside the calibration range. The sample was then diluted at 40x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within $\pm$ 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this $\pm$ 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9E120280

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

June 3, 2009

CASE NARRATIVE
D9E120280

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Twelve samples plus one set of MS/MSD samples were received under chain of custody on May 12, 2009. The samples were received at temperatures of 2.8°C, 3.7°C, 2.8°C, 4.7°C, 3.0°C, 2.9°C and 2.9°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Surrogate Chrysene-d12 was recovered below the lower control limit in samples W412-051109, W119-051109, W48-051109, W411-051109, W411DUP-051109, SLP12-051109, SLP3-051109, SLP11-051109, SLP13-051109 and W133-051109. The samples were reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

Sample W133-051109 was analyzed at two different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analysis performed at a 4x dilution, because the extract was diluted beyond the ability to quantitate recoveries.

The LCS associated with QC batch 9133172 exhibited recoveries below the lower control limits for the following compounds:

Acridine at 6% (limits 30-150%) Dibenzo(a,j)acridine at 13% (limits 30-150%)
Dibenzo(a,h)pyrene at 17% (limits 30-150%)

Analytes Dibenz(a,j)acridine, and Dibenzo(a,h)pyrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

The MS/MSD associated with QC batch 9133172 was performed using sample SLP3-051109, as requested. MS/MSD exhibited 18 of the 44 Matrix Spike compound recoveries and one of the three surrogate recoveries outside the control limits. MS/MSD exhibited 17 of the 44 Matrix Spike Duplicate compound recoveries and one of the three surrogate recoveries outside the control limits. The MS/MSD exhibited 8 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene
7H-Dibenzo[c,g]carbazole	Dibenz(a,h)acridine	Dibenz(a,j)acridine
Benzo(ghi)perylene	Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene
Dibenzo(a,h)pyrene	Dibenzo(a,l),pyrene	Benzo(a)pyrene
Benzo(e)pyrene	3-Methylcholanthrene	6-Methylchrysene
Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene
Perylene	Chrysene-d12	

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION **LOT: D9E120280** **ANALYSIS: SW846-8270C SIM**		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	62
MS	7	6
MS Surrogates	3	2
MSD	7	5
MSD Surrogates	3	2
MS/MSD RPD	7	5
Sample/Dup. RPD	31	31
Sample Surrogates	36	26
Samples and QC Internal Standard Area	48	48
TOTAL	**248**	**231**
% Completeness	**93.1%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9E120280					
Sample: W411-051109		**DUP: W411DUP-051109**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	7.2	Acenaphthene	8.3	14.2	
Acenaphthylene	1.7	Acenaphthylene	2.0	16.2	
Acridine	13	Acridine	11	16.7	
Anthracene	2.6	Anthracene	3.1	17.5	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	1.2	Benzo(b)thiophene	1.4	15.4	
Biphenyl	1.8	Biphenyl	2.1	15.4	
Carbazole	6.1	Carbazole	7.1	15.2	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	3.0	Dibenzofuran	3.5	15.4	
Dibenzothiophene	1.3	Dibenzothiophene	1.6	20.7	
2,3-Dihydroindene	4.5	2,3-Dihydroindene	5.4	18.2	
Fluoranthene	2.3	Fluoranthene	2.3	0.0	
Fluorene	4.4	Fluorene	5.0	12.8	
Indene	4.6	Indene	5.7	21.4	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	2.0	Indole	2.7	29.8	
2-Methylnaphthalene	5.6	2-Methylnaphthalene	7.2	25.0	
1-Methylnaphthalene	6.0	1-Methylnaphthalene	7.2	18.2	
Naphthalene	13	Naphthalene	17	26.7	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	6.1	Phenanthrene	6.9	12.3	
Pyrene	11	Pyrene	12	8.7	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9E120280

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W412-051109 05/11/09 10:30 001				
Acenaphthene	18	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.5 J	4.8	ng/L	SW846 8270C SIM
Acridine	30	6.5	ng/L	SW846 8270C SIM
Anthracene	40	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	15	5.2	ng/L	SW846 8270C SIM
Biphenyl	4.1 J	5.6	ng/L	SW846 8270C SIM
Carbazole	31	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	8.0	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	2.3 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	16	5.0	ng/L	SW846 8270C SIM
Fluoranthene	2.9 J	4.6	ng/L	SW846 8270C SIM
Fluorene	6.8	4.1	ng/L	SW846 8270C SIM
Indene	6.1	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	16	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	21	5.6	ng/L	SW846 8270C SIM
Naphthalene	290	8.6	ng/L	SW846 8270C SIM
Phenanthrene	8.1	6.3	ng/L	SW846 8270C SIM
Pyrene	13	4.2	ng/L	SW846 8270C SIM
W119-051109 05/11/09 11:00 002				
Acenaphthene	45	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	2.0 J	4.8	ng/L	SW846 8270C SIM
Anthracene	2.7 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	3.2 J	5.2	ng/L	SW846 8270C SIM
Carbazole	1.0 J	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	1.1 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	3.4 J	5.0	ng/L	SW846 8270C SIM
Indene	3.4 J	4.7	ng/L	SW846 8270C SIM
1-Methylnaphthalene	0.90 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	2.0 J	8.6	ng/L	SW846 8270C SIM
Pyrene	11	4.2	ng/L	SW846 8270C SIM
W48-051109 05/11/09 12:00 003				
Acenaphthene	78	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	3.8 J	4.8	ng/L	SW846 8270C SIM
Acridine	9.3	6.5	ng/L	SW846 8270C SIM
Anthracene	4.1 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	8.5	5.2	ng/L	SW846 8270C SIM
Carbazole	1.1 J	3.8	ng/L	SW846 8270C SIM
2,3-Dihydroindene	3.4 J	5.0	ng/L	SW846 8270C SIM
Indene	34	4.7	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E120280

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W48-051109 05/11/09 12:00 003				
2-Methylnaphthalene	2.0 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	5.1 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	4.5 J	8.6	ng/L	SW846 8270C SIM
Pyrene	2.5 J	4.2	ng/L	SW846 8270C SIM
W411-051109 05/11/09 13:55 004				
Acenaphthene	7.2	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.7 J	4.8	ng/L	SW846 8270C SIM
Acridine	13	6.5	ng/L	SW846 8270C SIM
Anthracene	2.6 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	1.2 J	5.2	ng/L	SW846 8270C SIM
Biphenyl	1.8 J	5.6	ng/L	SW846 8270C SIM
Carbazole	6.1	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	3.0 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.3 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	4.5 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	2.3 J	4.6	ng/L	SW846 8270C SIM
Fluorene	4.4	4.1	ng/L	SW846 8270C SIM
Indene	4.6 J	4.7	ng/L	SW846 8270C SIM
Indole	2.0 J	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	5.6 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	6.0	5.6	ng/L	SW846 8270C SIM
Naphthalene	13	8.6	ng/L	SW846 8270C SIM
Phenanthrene	6.1 J	6.3	ng/L	SW846 8270C SIM
Pyrene	11	4.2	ng/L	SW846 8270C SIM
W411DUP-051109 05/11/09 13:56 005				
Acenaphthene	8.3	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	2.0 J	4.8	ng/L	SW846 8270C SIM
Acridine	11	6.5	ng/L	SW846 8270C SIM
Anthracene	3.1 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	1.4 J	5.2	ng/L	SW846 8270C SIM
Biphenyl	2.1 J	5.6	ng/L	SW846 8270C SIM
Carbazole	7.1	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	3.5 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.6 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	5.4	5.0	ng/L	SW846 8270C SIM
Fluoranthene	2.3 J	4.6	ng/L	SW846 8270C SIM
Fluorene	5.0	4.1	ng/L	SW846 8270C SIM
Indene	5.7	4.7	ng/L	SW846 8270C SIM
Indole	2.7 J	4.7	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9E120280

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W411DUP-051109 05/11/09 13:56 005				
2-Methylnaphthalene	7.2	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	7.2	5.6	ng/L	SW846 8270C SIM
Naphthalene	17	8.6	ng/L	SW846 8270C SIM
Phenanthrene	6.9	6.3	ng/L	SW846 8270C SIM
Pyrene	12	4.2	ng/L	SW846 8270C SIM
W411FB-051109 05/11/09 13:53 006				
Naphthalene	1.7 J	8.6	ng/L	SW846 8270C SIM
W411FBD-051109 05/11/09 13:54 007				
Naphthalene	2.0 J	8.6	ng/L	SW846 8270C SIM
SLP11-051109 05/11/09 15:30 010				
Acenaphthene	1.4 J	5.7	ng/L	SW846 8270C SIM
Benzo(b)thiophene	1.4 J	5.2	ng/L	SW846 8270C SIM
2,3-Dihydroindene	2.4 J	5.0	ng/L	SW846 8270C SIM
Naphthalene	4.6 J	8.6	ng/L	SW846 8270C SIM
W133-051109 05/11/09 16:35 012				
Acenaphthene	27	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.5 J	4.8	ng/L	SW846 8270C SIM
Acridine	17	6.5	ng/L	SW846 8270C SIM
Anthracene	1.3 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	19	5.2	ng/L	SW846 8270C SIM
Biphenyl	7.0	5.6	ng/L	SW846 8270C SIM
Carbazole	52	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	10	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.9 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	32	5.0	ng/L	SW846 8270C SIM
Fluoranthene	3.2 J	4.6	ng/L	SW846 8270C SIM
Fluorene	8.5	4.1	ng/L	SW846 8270C SIM
Indene	7.9	4.7	ng/L	SW846 8270C SIM
Indole	2.3 J	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	40	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	41	5.6	ng/L	SW846 8270C SIM
Naphthalene	570	34	ng/L	SW846 8270C SIM
Phenanthrene	6.0 J	6.3	ng/L	SW846 8270C SIM
Pyrene	8.3	4.2	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9E120280

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9E120280

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C SIM	Rhain Carpenter	000130

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9E120280

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LCVVT	001	W412-051109	05/11/09	10:30
LCVV0	002	W119-051109	05/11/09	11:00
LCVV3	003	W48-051109	05/11/09	12:00
LCVV5	004	W411-051109	05/11/09	13:55
LCVV8	005	W411DUP-051109	05/11/09	13:56
LCVWC	006	W411FB-051109	05/11/09	13:53
LCVWH	007	W411FBD-051109	05/11/09	13:54
LCVWM	008	SLP12-051109	05/11/09	14:45
LCVWQ	009	SLP3-051109	05/11/09	15:00
LCVW1	010	SLP11-051109	05/11/09	15:30
LCVW5	011	SLP13-051109	05/11/09	16:40
LCVW8	012	W133-051109	05/11/09	16:35

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W412-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-001	**Work Order #...:** LCVVT1AA	**Matrix.....:** WG
Date Sampled...: 05/11/09	**Date Received..:** 05/12/09	
Prep Date.....: 05/13/09	**Analysis Date..:** 06/02/09	
Prep Batch #...: 9133172	**Analysis Time..:** 02:36	
Dilution Factor: 1		
	Method.....: SW846 8270C SIM	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**18**	**5.7**	**ng/L**
Acenaphthylene	**1.5 J**	**4.8**	**ng/L**
Acridine	**30**	**6.5**	**ng/L**
Anthracene	**40**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**15**	**5.2**	**ng/L**
Biphenyl	**4.1 J**	**5.6**	**ng/L**
Carbazole	**31**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**8.0**	**5.7**	**ng/L**
Dibenzothiophene	**2.3 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**16**	**5.0**	**ng/L**
Fluoranthene	**2.9 J**	**4.6**	**ng/L**
Fluorene	**6.8**	**4.1**	**ng/L**
Indene	**6.1**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**16**	**5.9**	**ng/L**
1-Methylnaphthalene	**21**	**5.6**	**ng/L**
Naphthalene	**290**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**8.1**	**6.3**	**ng/L**
Pyrene	**13**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	5.9 *	(28 - 101)
Fluorene d-10	34	(23 - 84)
Naphthalene-d8	30	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W119-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-002 **Work Order #...:** LCVV01AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 03:12
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**45**	**5.7**	**ng/L**
Acenaphthylene	**2.0 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**2.7 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**3.2 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.0 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**1.1 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**3.4 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**3.4 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	**0.90 J**	**5.6**	**ng/L**
Naphthalene	**2.0 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**11**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	21 *	(28 - 101)
Fluorene d-10	46	(23 - 84)
Naphthalene-d8	48	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W48-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-003 **Work Order #...:** LCVV31AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 03:48
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**78**	**5.7**	**ng/L**
Acenaphthylene	**3.8 J**	**4.8**	**ng/L**
Acridine	**9.3**	**6.5**	**ng/L**
Anthracene	**4.1 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**8.5**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.1 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**3.4 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**34**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**2.0 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**5.1 J**	**5.6**	**ng/L**
Naphthalene	**4.5 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**2.5 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	16 *	(28 - 101)
Fluorene d-10	47	(23 - 84)
Naphthalene-d8	45	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W411-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-004 **Work Order #...:** LCVV51AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 04:24
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**7.2**	**5.7**	**ng/L**
Acenaphthylene	**1.7 J**	**4.8**	**ng/L**
Acridine	**13**	**6.5**	**ng/L**
Anthracene	**2.6 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**1.2 J**	**5.2**	**ng/L**
Biphenyl	**1.8 J**	**5.6**	**ng/L**
Carbazole	**6.1**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**3.0 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.3 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**4.5 J**	**5.0**	**ng/L**
Fluoranthene	**2.3 J**	**4.6**	**ng/L**
Fluorene	**4.4**	**4.1**	**ng/L**
Indene	**4.6 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	**2.0 J**	**4.7**	**ng/L**
2-Methylnaphthalene	**5.6 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**6.0**	**5.6**	**ng/L**
Naphthalene	**13**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**6.1 J**	**6.3**	**ng/L**
Pyrene	**11**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	7.3 *	(28 - 101)
Fluorene d-10	32	(23 - 84)
Naphthalene-d8	28	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W411DUP-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-005	**Work Order #...:** LCVV81AA	**Matrix.....:** WG	
Date Sampled...: 05/11/09	**Date Received..:** 05/12/09		
Prep Date.....: 05/13/09	**Analysis Date..:** 06/02/09		
Prep Batch #...: 9133172	**Analysis Time..:** 05:00		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**8.3**	**5.7**	**ng/L**
Acenaphthylene	**2.0 J**	**4.8**	**ng/L**
Acridine	**11**	**6.5**	**ng/L**
Anthracene	**3.1 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**1.4 J**	**5.2**	**ng/L**
Biphenyl	**2.1 J**	**5.6**	**ng/L**
Carbazole	**7.1**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**3.5 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.6 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**5.4**	**5.0**	**ng/L**
Fluoranthene	**2.3 J**	**4.6**	**ng/L**
Fluorene	**5.0**	**4.1**	**ng/L**
Indene	**5.7**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	**2.7 J**	**4.7**	**ng/L**
2-Methylnaphthalene	**7.2**	**5.9**	**ng/L**
1-Methylnaphthalene	**7.2**	**5.6**	**ng/L**
Naphthalene	**17**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**6.9**	**6.3**	**ng/L**
Pyrene	**12**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	9.1 *	(28 - 101)
Fluorene d-10	37	(23 - 84)
Naphthalene-d8	33	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W411FB-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-006 **Work Order #...:** LCVWC1AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 05:36
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.7 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	46	(28 - 101)
Fluorene d-10	42	(23 - 84)
Naphthalene-d8	43	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W411FBD-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-007 **Work Order #...:** LCVWH1AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 06:12
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**2.0 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	50	(28 - 101)
Fluorene d-10	47	(23 - 84)
Naphthalene-d8	47	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP12-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-008 **Work Order #...:** LCVWM1AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 06:48
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	25 *	(28 - 101)
Fluorene d-10	43	(23 - 84)
Naphthalene-d8	43	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

City of Saint Louis Park

Client Sample ID: SLP3-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-009 **Work Order #...:** LCVWQ1AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 07:24
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	21 *	(28 - 101)
Fluorene d-10	43	(23 - 84)
Naphthalene-d8	45	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

City of Saint Louis Park

Client Sample ID: SLP11-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-010 **Work Order #...:** LCVW11AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 09:12
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**1.4 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**1.4 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**2.4 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**4.6 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	24 *	(28 - 101)
Fluorene d-10	44	(23 - 84)
Naphthalene-d8	49	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP13-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-011 **Work Order #...:** LCVW51AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 17:10
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	16 *	(28 - 101)
Fluorene d-10	35	(23 - 84)
Naphthalene-d8	39	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

City of Saint Louis Park

Client Sample ID: W133-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-012 **Work Order #...:** LCVW81AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 18:22
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**27**	**5.7**	**ng/L**
Acenaphthylene	**1.5 J**	**4.8**	**ng/L**
Acridine	**17**	**6.5**	**ng/L**
Anthracene	**1.3 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**19**	**5.2**	**ng/L**
Biphenyl	**7.0**	**5.6**	**ng/L**
Carbazole	**52**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**10**	**5.7**	**ng/L**
Dibenzothiophene	**1.9 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**32**	**5.0**	**ng/L**
Fluoranthene	**3.2 J**	**4.6**	**ng/L**
Fluorene	**8.5**	**4.1**	**ng/L**
Indene	**7.9**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	**2.3 J**	**4.7**	**ng/L**
2-Methylnaphthalene	**40**	**5.9**	**ng/L**
1-Methylnaphthalene	**41**	**5.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**6.0 J**	**6.3**	**ng/L**
Pyrene	**8.3**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	6.7 *	(28 - 101)
Fluorene d-10	35	(23 - 84)
Naphthalene-d8	30	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W133-051109

GC/MS Semivolatiles

Lot-Sample #...: D9E120280-012 **Work Order #...:** LCVW82AA **Matrix.....:** WG
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 17:46
Dilution Factor: 4

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**570**	**34**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

QC DATA ASSOCIATION SUMMARY

D9E120280

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9133172	9133110
002	WG	SW846 8270C SIM		9133172	9133110
003	WG	SW846 8270C SIM		9133172	9133110
004	WG	SW846 8270C SIM		9133172	9133110
005	WG	SW846 8270C SIM		9133172	9133110
006	WG	SW846 8270C SIM		9133172	9133110
007	WG	SW846 8270C SIM		9133172	9133110
008	WG	SW846 8270C SIM		9133172	9133110
009	WG	SW846 8270C SIM		9133172	9133110
010	WG	SW846 8270C SIM		9133172	9133110
011	WG	SW846 8270C SIM		9133172	9133110
012	WG	SW846 8270C SIM		9133172	9133110

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCWVD1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E130000-172

Prep Date.....: 05/13/09 **Analysis Time..:** 00:48
Analysis Date..: 06/02/09 **Prep Batch #...:** 9133172
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	48	(28 - 101)
Fluorene d-10	40	(23 - 84)
Naphthalene-d8	41	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 Work Order #...: LCWVD1AC Matrix.....: WATER
LCS Lot-Sample#: D9E130000-172
Prep Date.....: 05/13/09 Analysis Date..: 06/02/09
Prep Batch #...: 9133172 Analysis Time..: 01:24
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	44	(30 - 150)	SW846 8270C SIM
Acenaphthylene	37	(30 - 150)	SW846 8270C SIM
Acridine	0.0 a	(30 - 150)	SW846 8270C SIM
Anthracene	39	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	42	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	50	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	52	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	43	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	50	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	13 a	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	41	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	54	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	45	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	33	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	17 a	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	39	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	44	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	37	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	42	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	52	(37 - 105)	SW846 8270C SIM
Benzo(b)thiophene	43	(30 - 150)	SW846 8270C SIM
3-Methylcholanthrene	32	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	44	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	41	(30 - 150)	SW846 8270C SIM
Biphenyl	45	(30 - 150)	SW846 8270C SIM
Carbazole	47	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	36	(30 - 150)	SW846 8270C SIM
Chrysene	52	(20 - 136)	SW846 8270C SIM
Dibenzo(a,h)anthracene	51	(30 - 150)	SW846 8270C SIM
Dibenzofuran	49	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	44	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	36	(30 - 150)	SW846 8270C SIM
Fluoranthene	42	(30 - 150)	SW846 8270C SIM

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCWVD1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E130000-172

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**40**	**(34 - 96)**	**SW846 8270C SIM**
Indene	**38**	**(22 - 86)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**49**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**36**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**42**	**(25 - 95)**	**SW846 8270C SIM**
1-Methylnaphthalene	**42**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**42**	**(27 - 95)**	**SW846 8270C SIM**
Perylene	**45**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**48**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**41**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**40**	**(20 - 112)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	45	(28 - 101)
Fluorene d-10	36	(23 - 84)
Naphthalene-d8	39	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCWVD1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E130000-172
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 01:24
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	33.3	ng/L	44	SW846 8270C S
Acenaphthylene	75.0	28.0	ng/L	37	SW846 8270C S
Acridine	75.0	0.0 a	ng/L	0.0	SW846 8270C S
Anthracene	75.0	29.6	ng/L	39	SW846 8270C S
Benzo(a)anthracene	75.0	31.6	ng/L	42	SW846 8270C S
Benzo(b)fluoranthene	75.0	37.8	ng/L	50	SW846 8270C S
Benzo(k)fluoranthene	75.0	39.0	ng/L	52	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	31.9	ng/L	43	SW846 8270C S
Dibenz(a,h)acridine	75.0	37.5	ng/L	50	SW846 8270C S
Dibenz(a,j)acridine	75.0	9.38 a	ng/L	13	SW846 8270C S
2,3-Benzofuran	75.0	30.6	ng/L	41	SW846 8270C S
Benzo(ghi)perylene	75.0	40.2	ng/L	54	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	34.0	ng/L	45	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	24.9	ng/L	33	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	12.9 a	ng/L	17	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	29.1	ng/L	39	SW846 8270C S
Benzo(a)pyrene	75.0	33.0	ng/L	44	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	27.4	ng/L	37	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	31.2	ng/L	42	SW846 8270C S
Benzo(e)pyrene	75.0	38.7	ng/L	52	SW846 8270C S
Benzo(b)thiophene	75.0	32.0	ng/L	43	SW846 8270C S
3-Methylcholanthrene	75.0	24.3	ng/L	32	SW846 8270C S
6-Methylchrysene	75.0	32.6	ng/L	44	SW846 8270C S
1-Methylphenanthrene	75.0	30.4	ng/L	41	SW846 8270C S
Biphenyl	75.0	33.4	ng/L	45	SW846 8270C S
Carbazole	75.0	35.6	ng/L	47	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	27.0	ng/L	36	SW846 8270C S
Chrysene	75.0	38.7	ng/L	52	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	38.3	ng/L	51	SW846 8270C S
Dibenzofuran	75.0	36.5	ng/L	49	SW846 8270C S
Dibenzothiophene	75.0	33.4	ng/L	44	SW846 8270C S
2,3-Dihydroindene	75.0	27.1	ng/L	36	SW846 8270C S
Fluoranthene	75.0	31.4	ng/L	42	SW846 8270C S

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCWVD1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E130000-172

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**75.0**	**29.8**	**ng/L**	**40**	**SW846 8270C S**
Indene	**75.0**	**28.6**	**ng/L**	**38**	**SW846 8270C S**
Indeno(1,2,3-cd)pyrene	**75.0**	**36.8**	**ng/L**	**49**	**SW846 8270C S**
Indole	**75.0**	**26.9**	**ng/L**	**36**	**SW846 8270C S**
2-Methylnaphthalene	**75.0**	**31.4**	**ng/L**	**42**	**SW846 8270C S**
1-Methylnaphthalene	**75.0**	**31.7**	**ng/L**	**42**	**SW846 8270C S**
Naphthalene	**75.0**	**31.6**	**ng/L**	**42**	**SW846 8270C S**
Perylene	**75.0**	**33.6**	**ng/L**	**45**	**SW846 8270C S**
Phenanthrene	**75.0**	**35.6**	**ng/L**	**48**	**SW846 8270C S**
Pyrene	**75.0**	**30.4**	**ng/L**	**41**	**SW846 8270C S**
Quinoline	**75.0**	**29.9**	**ng/L**	**40**	**SW846 8270C S**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	45	(28 - 101)
Fluorene d-10	36	(23 - 84)
Naphthalene-d8	39	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCVWQ1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E120280-009 LCVWQ1AD-MSD
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 08:00
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	52	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	17	(0-50)	SW846 8270C SIM
Acenaphthylene	52	(30 - 150)			SW846 8270C SIM
	41	(30 - 150)	20	(0-50)	SW846 8270C SIM
Acridine	39	(30 - 150)			SW846 8270C SIM
	44	(30 - 150)	16	(0-50)	SW846 8270C SIM
Anthracene	58	(30 - 150)			SW846 8270C SIM
	42	(30 - 150)	30	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	27 a	(30 - 150)			SW846 8270C SIM
	11 a,p	(30 - 150)	78	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	8.8 a	(30 - 150)			SW846 8270C SIM
	5.0 a,p	(30 - 150)	52	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	7.1 a	(30 - 150)			SW846 8270C SIM
	4.5 a	(30 - 150)	41	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	5.8 a	(30 - 150)			SW846 8270C SIM
	2.8 a,p	(30 - 150)	66	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	8.3 a	(30 - 150)			SW846 8270C SIM
	4.9 a	(30 - 150)	49	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	5.7 a	(30 - 150)			SW846 8270C SIM
	3.4 a	(30 - 150)	47	(0-50)	SW846 8270C SIM
2,3-Benzofuran	46	(30 - 150)			SW846 8270C SIM
	40	(30 - 150)	12	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	4.1 a	(30 - 150)			SW846 8270C SIM
	3.5 a	(30 - 150)	11	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	3.1 a	(30 - 150)			SW846 8270C SIM
	3.1 a	(30 - 150)	1.5	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	1.8 a	(30 - 150)			SW846 8270C SIM
	2.2 a	(30 - 150)	20	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	0.45 a	(30 - 150)			SW846 8270C SIM
	0.88 a,p	(30 - 150)	67	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	10 a	(30 - 150)			SW846 8270C SIM
	6.6 a	(30 - 150)	40	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	6.9 a	(30 - 150)			SW846 8270C SIM
	3.9 a,p	(30 - 150)	52	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	51	(30 - 150)			SW846 8270C SIM
	31	(30 - 150)	45	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	49	(30 - 150)			SW846 8270C SIM
	40	(30 - 150)	16	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCVWQ1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E120280-009 LCVWQ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	6.9 a	(37 - 105)			SW846 8270C SIM
	4.0 a,p	(37 - 105)	51	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	50	(30 - 150)			SW846 8270C SIM
	42	(30 - 150)	14	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	8.8 a	(30 - 150)			SW846 8270C SIM
	0.0	(30 - 150)	200	(0-50)	SW846 8270C SIM
6-Methylchrysene	17 a	(30 - 150)			SW846 8270C SIM
	8.0 a,p	(30 - 150)	70	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	52	(30 - 150)			SW846 8270C SIM
	39	(30 - 150)	26	(0-50)	SW846 8270C SIM
Biphenyl	51	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	15	(0-50)	SW846 8270C SIM
Carbazole	67	(30 - 150)			SW846 8270C SIM
	49	(30 - 150)	29	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	42	(30 - 150)			SW846 8270C SIM
	34	(30 - 150)	18	(0-50)	SW846 8270C SIM
Chrysene	25	(20 - 136)			SW846 8270C SIM
	12 a,p	(20 - 136)	68	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	3.6 a	(30 - 150)			SW846 8270C SIM
	3.6 a	(30 - 150)	3.4	(0-50)	SW846 8270C SIM
Dibenzofuran	57	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	17	(0-50)	SW846 8270C SIM
Dibenzothiophene	54	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	21	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	41	(30 - 150)			SW846 8270C SIM
	35	(30 - 150)	13	(0-50)	SW846 8270C SIM
Fluoranthene	52	(30 - 150)			SW846 8270C SIM
	34	(30 - 150)	39	(0-50)	SW846 8270C SIM
Fluorene	47	(34 - 96)			SW846 8270C SIM
	38	(34 - 96)	20	(0-50)	SW846 8270C SIM
Indene	45	(22 - 86)			SW846 8270C SIM
	38	(22 - 86)	13	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	4.1 a	(30 - 150)			SW846 8270C SIM
	3.7 a	(30 - 150)	6.4	(0-50)	SW846 8270C SIM
Indole	57	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	25	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	48	(25 - 95)			SW846 8270C SIM
	40	(25 - 95)	14	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	48	(30 - 150)			SW846 8270C SIM
	40	(30 - 150)	14	(0-50)	SW846 8270C SIM
Naphthalene	48	(27 - 95)			SW846 8270C SIM
	41	(27 - 95)	13	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCVWQ1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E120280-009 LCVWQ1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**6.5 a**	**(30 - 150)**			**SW846 8270C SIM**
	0.0	**(30 - 150)**	**200**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**55**	**(30 - 150)**			**SW846 8270C SIM**
	43	**(30 - 150)**	**21**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**50**	**(30 - 150)**			**SW846 8270C SIM**
	32	**(30 - 150)**	**41**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**58**	**(20 - 112)**			**SW846 8270C SIM**
	45	**(20 - 112)**	**23**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	23 *	(28 - 101)
	10 *	(28 - 101)
Fluorene d-10	43	(23 - 84)
	34	(23 - 84)
Naphthalene-d8	46	(22 - 97)
	38	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCVWQ1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E120280-009 LCVWQ1AD-MSD
Date Sampled...: 05/11/09 **Date Received..:** 05/12/09
Prep Date.....: 05/13/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9133172 **Analysis Time..:** 08:00
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	81.7	42.4	ng/L	52		SW846 8270C SIM
	ND	84.4	36.0	ng/L	43	17	SW846 8270C SIM
Acenaphthylene	ND	81.7	42.5	ng/L	52		SW846 8270C SIM
	ND	84.4	34.8	ng/L	41	20	SW846 8270C SIM
Acridine	ND	81.7	31.5	ng/L	39		SW846 8270C SIM
	ND	84.4	37.0	ng/L	44	16	SW846 8270C SIM
Anthracene	ND	81.7	47.8	ng/L	58		SW846 8270C SIM
	ND	84.4	35.3	ng/L	42	30	SW846 8270C SIM
Benzo(a)anthracene	ND	81.7	21.7	ng/L	27 a		SW846 8270C SIM
	ND	84.4	9.59	ng/L	11 a,p	78	SW846 8270C SIM
Benzo(b)fluoranthene	ND	81.7	7.17	ng/L	8.8 a		SW846 8270C SIM
	ND	84.4	4.23	ng/L	5.0	52	SW846 8270C SIM
	Qualifiers: a,p						
Benzo(k)fluoranthene	ND	81.7	5.82	ng/L	7.1 a		SW846 8270C SIM
	ND	84.4	3.84	ng/L	4.5 a	41	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	ND	81.7	4.72	ng/L	5.8 a		SW846 8270C SIM
	ND	84.4	2.38	ng/L	2.8	66	SW846 8270C SIM
	Qualifiers: a,p						
Dibenz(a,h)acridine	ND	81.7	6.76	ng/L	8.3 a		SW846 8270C SIM
	ND	84.4	4.11	ng/L	4.9 a	49	SW846 8270C SIM
Dibenz(a,j)acridine	ND	81.7	4.62	ng/L	5.7 a		SW846 8270C SIM
	ND	84.4	2.85	ng/L	3.4 a	47	SW846 8270C SIM
2,3-Benzofuran	ND	81.7	38.0	ng/L	46		SW846 8270C SIM
	ND	84.4	33.6	ng/L	40	12	SW846 8270C SIM
Benzo(ghi)perylene	ND	81.7	3.32	ng/L	4.1 a		SW846 8270C SIM
	ND	84.4	2.97	ng/L	3.5 a	11	SW846 8270C SIM
Dibenzo(a,e)pyrene	ND	81.7	2.57	ng/L	3.1 a		SW846 8270C SIM
	ND	84.4	2.61	ng/L	3.1 a	1.5	SW846 8270C SIM
Dibenzo(a,i)pyrene	ND	81.7	1.50	ng/L	1.8 a		SW846 8270C SIM
	ND	84.4	1.83	ng/L	2.2 a	20	SW846 8270C SIM
Dibenzo(a,h)pyrene	ND	81.7	0.370	ng/L	0.45 a		SW846 8270C SIM
	ND	84.4	0.746	ng/L	0.88	67	SW846 8270C SIM
	Qualifiers: a,p						
Dibenzo(a,l)pyrene	ND	81.7	8.38	ng/L	10 a		SW846 8270C SIM
	ND	84.4	5.57	ng/L	6.6 a	40	SW846 8270C SIM
Benzo(a)pyrene	ND	81.7	5.61	ng/L	6.9 a		SW846 8270C SIM
	ND	84.4	3.29	ng/L	3.9	52	SW846 8270C SIM
	Qualifiers: a,p						

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCVWQ1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E120280-009 LCVWQ1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
7,12-Dimethylbenz(a)-anthracene	ND	81.7	41.4	ng/L	51		SW846 8270C SIM
	ND	84.4	26.1	ng/L	31	45	SW846 8270C SIM
2,6-Dimethylnaphthalene	ND	81.7	39.8	ng/L	49		SW846 8270C SIM
	ND	84.4	33.9	ng/L	40	16	SW846 8270C SIM
Benzo(e)pyrene	ND	81.7	5.63	ng/L	6.9 a		SW846 8270C SIM
	ND	84.4	3.34	ng/L	4.0	51	SW846 8270C SIM
	Qualifiers: a,p						
Benzo(b)thiophene	ND	81.7	40.6	ng/L	50		SW846 8270C SIM
	ND	84.4	35.2	ng/L	42	14	SW846 8270C SIM
3-Methylcholanthrene	ND	81.7	7.21	ng/L	8.8 a		SW846 8270C SIM
	ND	84.4		ng/L	0.0	200	SW846 8270C SIM
6-Methylchrysene	ND	81.7	14.0	ng/L	17 a		SW846 8270C SIM
	ND	84.4	6.74	ng/L	8.0	70	SW846 8270C SIM
	Qualifiers: a,p						
1-Methylphenanthrene	ND	81.7	42.8	ng/L	52		SW846 8270C SIM
	ND	84.4	32.9	ng/L	39	26	SW846 8270C SIM
Biphenyl	ND	81.7	41.6	ng/L	51		SW846 8270C SIM
	ND	84.4	36.0	ng/L	43	15	SW846 8270C SIM
Carbazole	ND	81.7	54.9	ng/L	67		SW846 8270C SIM
	ND	84.4	41.1	ng/L	49	29	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	ND	81.7	34.4	ng/L	42		SW846 8270C SIM
	ND	84.4	28.8	ng/L	34	18	SW846 8270C SIM
Chrysene	ND	81.7	20.5	ng/L	25		SW846 8270C SIM
	ND	84.4	10.0	ng/L	12 a,p	68	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	81.7	2.92	ng/L	3.6 a		SW846 8270C SIM
	ND	84.4	3.02	ng/L	3.6 a	3.4	SW846 8270C SIM
Dibenzofuran	ND	81.7	46.4	ng/L	57		SW846 8270C SIM
	ND	84.4	39.1	ng/L	46	17	SW846 8270C SIM
Dibenzothiophene	ND	81.7	44.4	ng/L	54		SW846 8270C SIM
	ND	84.4	36.1	ng/L	43	21	SW846 8270C SIM
2,3-Dihydroindene	ND	81.7	33.9	ng/L	41		SW846 8270C SIM
	ND	84.4	29.7	ng/L	35	13	SW846 8270C SIM
Fluoranthene	ND	81.7	42.8	ng/L	52		SW846 8270C SIM
	ND	84.4	28.9	ng/L	34	39	SW846 8270C SIM
Fluorene	ND	81.7	38.8	ng/L	47		SW846 8270C SIM
	ND	84.4	31.7	ng/L	38	20	SW846 8270C SIM
Indene	ND	81.7	36.8	ng/L	45		SW846 8270C SIM
	ND	84.4	32.3	ng/L	38	13	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	81.7	3.35	ng/L	4.1 a		SW846 8270C SIM
	ND	84.4	3.14	ng/L	3.7 a	6.4	SW846 8270C SIM

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E120280 **Work Order #...:** LCVWQ1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E120280-009 LCVWQ1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Indole	**ND**	**81.7**	**46.7**	**ng/L**	**57**		**SW846 8270C SIM**
	ND	**84.4**	**36.4**	**ng/L**	**43**	**25**	**SW846 8270C SIM**
2-Methylnaphthalene	**ND**	**81.7**	**39.2**	**ng/L**	**48**		**SW846 8270C SIM**
	ND	**84.4**	**34.0**	**ng/L**	**40**	**14**	**SW846 8270C SIM**
1-Methylnaphthalene	**ND**	**81.7**	**39.4**	**ng/L**	**48**		**SW846 8270C SIM**
	ND	**84.4**	**34.1**	**ng/L**	**40**	**14**	**SW846 8270C SIM**
Naphthalene	**ND**	**81.7**	**39.5**	**ng/L**	**48**		**SW846 8270C SIM**
	ND	**84.4**	**34.6**	**ng/L**	**41**	**13**	**SW846 8270C SIM**
Perylene	**ND**	**81.7**	**5.32**	**ng/L**	**6.5 a**		**SW846 8270C SIM**
	ND	**84.4**		**ng/L**	**0.0**	**200**	**SW846 8270C SIM**
Phenanthrene	**ND**	**81.7**	**45.3**	**ng/L**	**55**		**SW846 8270C SIM**
	ND	**84.4**	**36.5**	**ng/L**	**43**	**21**	**SW846 8270C SIM**
Pyrene	**ND**	**81.7**	**41.1**	**ng/L**	**50**		**SW846 8270C SIM**
	ND	**84.4**	**27.2**	**ng/L**	**32**	**41**	**SW846 8270C SIM**
Quinoline	**ND**	**81.7**	**47.6**	**ng/L**	**58**		**SW846 8270C SIM**
	ND	**84.4**	**37.7**	**ng/L**	**45**	**23**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	23 *	(28 - 101)
	10 *	(28 - 101)
Fluorene d-10	43	(23 - 84)
	34	(23 - 84)
Naphthalene-d8	46	(22 - 97)
	38	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

2.8 C 2.8 3.0 2.9
3.7 4.7 2.9
CHK 5/12/09
IR1

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St. Louis Park	Project Manager: Scott Anderson	Date: 5-11-2009	Chain of Custody Number: 150784
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 1 of 2
City: St Louis Park / State: MN / Zip Code: 55416	Site Contact: D. Tarara	Lab Contact: Lisa Uriell	
Project Name and Location (State): Reilly (MN)	Carrier/Waybill Number: Fed Ex/8692 6052 5210		
Contract/Purchase Order/Quote No.: 01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: RAH PPT	Special Instructions/ Conditions of Receipt
W412-051109	05/11/09	1030		X			6						X	
W119-051109	05/11/09	1100												
W48-051109	05/11/09	1200												
W411-051109	05/11/09	1355												
W411 DUP-051109	05/11/09	1356												
W411FB-051109	05/11/09	1353												
W411FBD-051109	05/11/09	1354												
SLP12-051109	05/11/09	1445												
SLP3-051109	05/11/09	1500												
SLP3MS-051109	05/11/09	1505												Matrix Spike
SLP3MSD-051109	05/11/09	1510												Matrix Spike Dup
SLP11-051109	05/11/09	1530												

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [ ] 14 Days [ ] 21 Days [ ] Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	5/11/09	1800	1. Received By	5/12/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St Louis Park	Project Manager: Scott Anderson	Date: 5-11-2009	Chain of Custody Number: 150800
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 2 of 2
City: St Louis Park / State: MN / Zip Code: 55416	Site Contact: D. Tarman	Lab Contact: Lisa Uriell	
Project Name and Location (State): Railway (MN)	Carrier/Waybill Number: FedEx/8692 6052 5200		
Contract/Purchase Order/Quote No.: 01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PFT	Special Instructions/ Conditions of Receipt
SUP13-051109	05/11/09	1640		X			6						X	
W133-051109	05/11/09	1635		X			6						X	

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [ ] 14 Days [ ] 21 Days [ ] Other ____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	5/11/09	1800	1. Received By	5/12/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9G120780 Date/Time Received: 5/12/09 0900

Company Name & Sampling Site: City of St Louis Park

PM to Complete This Section: *Yes* ☐ *No* ☒ (156)
Residual chlorine check required: ☐

Quarantined: *Yes* ☐ *No* ☒

Quote #: 34743

* Return coolers Priority Overnight to address attached *

Special Instructions:

- Ppt PAHs use Protocol B
- Ppb PAHs use Protocol C
- Log "FBD" test code for samples w/ "FBD" in sample ID

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s):								
Temperatures (°C):	2.8	3.7	2.8	4.7	3.0	2.9	2.9	

N/A	*Yes*	*No*		*Initials*
☐	☒	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	MB
	☐	☐	2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No:___	
	☐	☐	3. Chain of custody present? If no, document on CUR.	
	☐	☒	4. Bottles broken and/or are leaking? If yes, document on CUR.	
	☐	☒	5. Multiphasic samples obvious? If yes, document on CUR.	
	☐	☐	6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.	
☒	☐	☐	7. pH of all samples checked and meet requirements? If no, document on CUR.	
	☐	☐	8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	☐	☐	9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
☒	☐	☐	10. Were VOA samples without headspace? If no, document on CUR.	
☒	☐	☐	11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
☒	☐	☐	14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
☐	☒	☐	15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	☐	☒	16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☐	☒	17. Are analyses with short holding times requested?	
	☐	☒	18. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D9E120280

Login Checks:

N/A	Yes	No		Initials
☐	☑	☐	19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.	
☐	☑ (MS/MSD)	☐	20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
☐	☑	☐	21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
☐	☑	☐	22. Were special log in instructions read and followed?	
☑	☐	☐	23. Were AFCEE metals logged for refrigerated storage?	
☐	☑	☐	24. Were tests logged checked against the COC? Which samples were confirmed? ✓	
☐	☐	☐	25. Was a Rush form completed for quick TAT?	
☑	☐	☐	26. Was a Short Hold form completed for any short holds?	
☐	☐	☑	27. Were special archiving instructions indicated in the General Comments? If so, what were they?	

Labeling and Storage Checks:

				Initials
☑	☐	☐	28. Was the subcontract COC signed and sent with samples to bottle prep?	
☐	☑	☐	29. Were sample labels double-checked by a second person?	
☑	☐	☐	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
☐	☑	☐	31. Did the sample ID, Date, and Time from label match what was logged?	
☐	☐	☐	32. Were stickers for special archiving instructions affixed to each box? See #27	
☐	☐	☐	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

AECOM

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Memorandum

Date: March 8, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9E120280
Appendix G

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of ten aqueous samples and two field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C SIM. The samples were collected on May 11, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9E120280.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W412-051109	W119-051109
W48-051109	W411-051109
W411DUP-051109	W411FB-051109
W411FBD-051109	SLP12-051109
SLP3-051109	SLP11-051109
SLP13-051109	W133-051109

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REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blank 9133172. The field blanks W411FB-051109 and W411FBD-051109 had concentrations of naphthalene detected below the reporting limit. As none of the detected concentrations exceeded the ALs, no action was taken.

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses with the exception of ten samples. The surrogate percent recovery outside (below) the acceptance criteria was chrysene-d12 in each case. No action was required since the remaining two base/neutral surrogates were within QC recovery limits.

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MS/MSD Results

MS/MSD analyses were performed on sample SLP3-051109. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
Benzo(a)anthracene (MS)	27		30-150		J	UJ
Benzo(a)anthracene (MSD)	11	78	30-150	0-50	J	UJ
Benzo(b)fluoranthene (MS)	8.8		30-150		J	UJ
Benzo(b)fluoranthene (MSD)	5.0	52	30-150	0-50	J	UJ
Benzo(k)fluoranthene (MS)	7.1		30-150		J	UJ
Benzo(k)fluoranthene (MSD)	4.5		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MS)	5.8		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MSD)	2.8	66	30-150	0-50	J	UJ
Dibenz (a,h) acridine (MS)	8.3		30-150		J	UJ
Dibenz (a,h) acridine (MSD)	4.9		30-150		J	UJ
Dibenz (a, j) acridine (MS)	5.7		30-150		J	UJ
Dibenz (a, j) acridine (MSD)	3.4		30-150		J	UJ
Benzo(ghi)perylene (MS)	4.1		30-150		J	UJ
Benzo(ghi)perylene (MSD)	3.5		30-150		J	UJ
Dibenzo (a, e) pyrene (MS)	3.1		30-150		J	UJ
Dibenzo (a, e) pyrene (MSD)	3.1		30-150		J	UJ
Dibenzo (a, i) pyrene (MS)	1.8		30-150		J	UJ
Dibenzo (a, i) pyrene (MSD)	2.2		30-150		J	UJ
Dibenzo (a, h) pyrene (MS)	0.45		30-150		J	UJ
Dibenzo (a, h) pyrene (MSD)	0.88	67	30-150	0-50	J	UJ
Dibenzo (a, l) pyrene	10		30-150		J	UJ

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(MS)						
Dibenzo (a, l) pyrene (MSD)	6.6		30-150		J	UJ
Benzo(a)pyrene (MS)	6.9		30-150		J	UJ
Benzo(a)pyrene (MSD)	3.9	52	30-150	0-50	J	UJ
Benzo(e)pyrene (MS)	6.9		30-150		J	UJ
Benzo(e)pyrene (MSD)	4.0	51	30-150	0-50	J	UJ
3-Methylcholanthrene (MS)	8.8		30-150		J	UJ
6-Methylchrysene (MS)	17		30-150		J	UJ
6-Methylchrysene (MSD)	8.0	70	30-150	0-50	J	UJ
Chrysene (MSD)	12	68	30-150	0-50	J	UJ
Dibenzo(a,h)anthracene (MS)	3.6		30-150		J	UJ
Dibenzo(a,h)anthracene (MSD)	3.6		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MS)	4.1		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MSD)	3.7		30-150		J	UJ
Perylene (MS)	6.5		30-150		J	UJ
Perylene (MSD)	0.0	200	30-150	0-50	J	UJ
Associated sample: SLP3-051109						

LCS Results

The following table summarizes the %Rs that fell below the QC acceptance criteria for the LCS analysis.

Compound	%R (RPD)	QC Limits (RPD Limits)	Actions	
			Detects	Nondetects
Acridine	0.0	30-150	J	UJ
Dibenz (a,j) acridine	13	30-150	J	UJ
Dibenzo (a,h) pyrene	17	30-150	J	UJ
Associated samples: All samples in this data set				

Field Duplicate Results

Samples W411-051109 and W411-051109 were the field duplicate pairs analyzed with this data set.

A total of 19 of 31 compounds were detected. All RPDs were within the acceptance criteria.

Sample Quantitation/Detection Limit Results

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Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W133-051109 was initially analyzed undiluted. The results of some compounds fell outside the calibration range. The sample was then diluted at 4x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9E130273

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

June 4, 2009

CASE NARRATIVE
D9C130273

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Ten samples plus one set of MS/MSD samples were received under chain of custody on May 13, 2009. The samples were received at temperatures of 2.5°C, 2.7°C and 2.6°C. All sample containers were received in acceptable condition, with the exception of the item noted below.

A sample ID discrepancy was noted between the information listed on the Chain of Custody and the sample container labels for TestAmerica's sample D9E130273-007. The Chain of Custody lists the sample ID as W120-051209, while the container labels list the sample ID as W20-051209. As sample W120 was already received on Saturday, May 9, and based on the Sampling Schedule received from Drew Tarrara on April 15, 2009, the sample was logged per the container labels (W20-051209). The client was notified May 14, 2009.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

The MS/MSD associated with QC batch 9135221 was performed using sample W20-051209, as requested. The MS/MSD exhibited 1 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited relative percent difference data outside the control limits for the Dibenzo(a,h)pyrene. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

No other anomalies were noted.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Surrogate Chrysene-d12 was recovered below the lower control limit in sample W122-051209. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, further corrective action was deemed unnecessary.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

The Method Blank associated with QC batch 9135172 exhibited surrogate recoveries below the lower control limits. Re-extraction of the associated sample was not possible due to insufficient remaining sample volume. Therefore, further corrective action was deemed unnecessary.

The LCS/LCSD associated with QC batch 9135172 exhibited recoveries outside the control limits for the following compounds:

Dibenzo(a,h)pyrene = LCS at 3.4%, LCSD at 14% (limits 30-150%) and RPD at 121% (limits 0-50%)
7,12-Dimethylbenz(a)anthracene = LCS at 27% and RPD at 59% (limits 0-50%)
3-Methylcholanthrene = LCS at 8.8% and RPD at 133% (limits 0-133%)

Analytes Dibenzo(a,h)pyrene, 7,12-Dimethylbenz(a)anthracene and 3-Methylcholanthrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. The laboratory noted that these are new compounds for this method, and only advisory limits have been set until enough historical laboratory data can be accumulated to generate more realistic limits.

The method required MS/MSD could not be performed for QC re-extraction batch 9135172, due to insufficient sample volume. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines.

No other anomalies were noted.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9E130273
ANALYSIS: SW846-8270C

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	62
MS	7	7
MS Surrogates	3	3
MSD	7	7
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	27	27
Samples and QC Internal Standard Area	39	39
TOTAL	**230**	**230**
% Completeness	**100.0%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9E130273					
Sample: W433-0512109		DUP: W433DUP-051209			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	ND	Acenaphthene	ND	0.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	ND	2,3-Dihydroindene	ND	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	ND	Naphthalene	ND	0.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND. Considered acceptable if the positive

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION **LOT: D9E130273** **ANALYSIS: SW846-8270C SIM**		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	31	31
MB Surrogates	3	0
LCS	14	14
LCS Surrogates	6	6
FB/FBD	NA	NA
MS	NA	NA
MS Surrogates	NA	NA
MSD	NA	NA
MSD Surrogates	NA	NA
MS/MSD RPD	NA	NA
Sample/Dup. RPD	NA	NA
Sample Surrogates	3	2
Samples and QC Internal Standard Area	12	12
TOTAL	**69**	**65**
% Completeness	**94.2%**	

EXECUTIVE SUMMARY - Detection Highlights

D9E130273

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W122-051209 05/12/09 09:10 001				
Acenaphthene	19	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.1 J	4.8	ng/L	SW846 8270C SIM
Acridine	21	6.5	ng/L	SW846 8270C SIM
Anthracene	1.1 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	37	5.2	ng/L	SW846 8270C SIM
Biphenyl	6.1	5.6	ng/L	SW846 8270C SIM
Carbazole	40	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	5.0 J	5.7	ng/L	SW846 8270C SIM
2,3-Dihydroindene	34	5.0	ng/L	SW846 8270C SIM
Fluorene	4.2	4.1	ng/L	SW846 8270C SIM
Indene	5.8	4.7	ng/L	SW846 8270C SIM
Indole	5.9	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	6.4	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	6.8	5.6	ng/L	SW846 8270C SIM
Naphthalene	130	8.6	ng/L	SW846 8270C SIM
Pyrene	5.4	4.2	ng/L	SW846 8270C SIM
W409-051209 05/12/09 17:10 010				
1-Methylnaphthalene	1.6 J	10	ug/L	SW846 8270C

METHODS SUMMARY

D9E130273

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9E130273

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Rhain Carpenter	000130
SW846 8270C SIM	Rhain Carpenter	000130

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9E130273

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LC0ER	001	W122-051209	05/12/09	09:10
LC0EW	002	W433-051209	05/12/09	11:15
LC0EX	003	W433DUP-051209	05/12/09	11:20
LC0E2	004	W433FB-051209	05/12/09	11:10
LC0E5	005	W433FBD-051209	05/12/09	11:05
LC0E6	006	W143-051209	05/12/09	12:15
LC0E9	007	W20-051209	05/12/09	13:00
LC0FC	008	W438-051209	05/12/09	15:00
LC0FH	009	W101-051209	05/12/09	15:45
LC0FL	010	W409-051209	05/12/09	17:10

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W433-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-002 **Work Order #...:** LC0EW1AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 18:59
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	34	(30 - 160)
Fluorene d-10	60	(36 - 127)
Naphthalene-d8	58	(37 - 107)

City of Saint Louis Park

Client Sample ID: W433DUP-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-003 **Work Order #...:** LC0EX1AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 19:34
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	69	(30 - 160)
Fluorene d-10	60	(36 - 127)
Naphthalene-d8	55	(37 - 107)

City of Saint Louis Park

Client Sample ID: W433FB-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-004 **Work Order #...:** LC0E21AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 20:08
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(30 - 160)
Fluorene d-10	62	(36 - 127)
Naphthalene-d8	67	(37 - 107)

City of Saint Louis Park

Client Sample ID: W433FBD-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-005 **Work Order #...:** LC0E51AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 20:42
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	74	(30 - 160)
Fluorene d-10	63	(36 - 127)
Naphthalene-d8	68	(37 - 107)

City of Saint Louis Park

Client Sample ID: W143-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-006 **Work Order #...:** LC0E61AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 21:16
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	69	(30 - 160)
Fluorene d-10	60	(36 - 127)
Naphthalene-d8	56	(37 - 107)

City of Saint Louis Park

Client Sample ID: W20-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-007 **Work Order #...:** LC0E91AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 21:50
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	67	(30 - 160)
Fluorene d-10	60	(36 - 127)
Naphthalene-d8	55	(37 - 107)

City of Saint Louis Park

Client Sample ID: W438-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-008 **Work Order #...:** LC0FC1AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 23:33
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	45	(30 - 160)
Fluorene d-10	59	(36 - 127)
Naphthalene-d8	57	(37 - 107)

City of Saint Louis Park

Client Sample ID: W101-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-009 **Work Order #...:** LC0FH1AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/03/09
Prep Batch #...: 9135221 **Analysis Time..:** 00:08
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	41	(30 - 160)
Fluorene d-10	56	(36 - 127)
Naphthalene-d8	44	(37 - 107)

City of Saint Louis Park

Client Sample ID: W409-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-010 **Work Order #...:** LC0FL1AA **Matrix.....:** WG
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/03/09
Prep Batch #...: 9135221 **Analysis Time..:** 00:42
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**1.6 J**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	50	(30 - 160)
Fluorene d-10	57	(36 - 127)
Naphthalene-d8	52	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W122-051209

GC/MS Semivolatiles

Lot-Sample #...: D9E130273-001	**Work Order #...:** LC0ER1AA	**Matrix.....:** WG	
Date Sampled...: 05/12/09	**Date Received..:** 05/13/09		
Prep Date.....: 05/15/09	**Analysis Date..:** 06/02/09		
Prep Batch #...: 9135172	**Analysis Time..:** 02:00		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**19**	**5.7**	**ng/L**
Acenaphthylene	**1.1 J**	**4.8**	**ng/L**
Acridine	**21**	**6.5**	**ng/L**
Anthracene	**1.1 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**37**	**5.2**	**ng/L**
Biphenyl	**6.1**	**5.6**	**ng/L**
Carbazole	**40**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**5.0 J**	**5.7**	**ng/L**
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**34**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	**4.2**	**4.1**	**ng/L**
Indene	**5.8**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	**5.9**	**4.7**	**ng/L**
2-Methylnaphthalene	**6.4**	**5.9**	**ng/L**
1-Methylnaphthalene	**6.8**	**5.6**	**ng/L**
Naphthalene	**130**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**5.4**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	7.9 *	(28 - 101)
Fluorene d-10	38	(23 - 84)
Naphthalene-d8	36	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9E130273

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9135172	
002	WG	SW846 8270C		9135221	9135116
003	WG	SW846 8270C		9135221	9135116
004	WG	SW846 8270C		9135221	9135116
005	WG	SW846 8270C		9135221	9135116
006	WG	SW846 8270C		9135221	9135116
007	WG	SW846 8270C		9135221	9135116
008	WG	SW846 8270C		9135221	9135116
009	WG	SW846 8270C		9135221	9135116
010	WG	SW846 8270C		9135221	9135116

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4VL1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E150000-221

Prep Date.....: 05/15/09 **Analysis Time..:** 16:42
Analysis Date..: 06/02/09 **Prep Batch #...:** 9135221
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(30 - 160)
Fluorene d-10	62	(36 - 127)
Naphthalene-d8	67	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 Work Order #...: LC4VL1AC Matrix.....: WATER
LCS Lot-Sample#: D9E150000-221
Prep Date.....: 05/15/09 Analysis Date..: 06/02/09
Prep Batch #...: 9135221 Analysis Time..: 17:16
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	72	(30 - 150)	SW846 8270C
Acenaphthylene	73	(30 - 150)	SW846 8270C
Acridine	71	(30 - 150)	SW846 8270C
Anthracene	76	(30 - 150)	SW846 8270C
Benzo(a)anthracene	77	(30 - 150)	SW846 8270C
Benzo(b)fluoranthene	74	(30 - 150)	SW846 8270C
Benzo(k)fluoranthene	79	(30 - 150)	SW846 8270C
7H-Dibenzo[c,g]carbazole	72	(30 - 150)	SW846 8270C
Dibenz(a,h)acridine	81	(30 - 150)	SW846 8270C
Dibenz(a,j)acridine	68	(30 - 150)	SW846 8270C
2,3-Benzofuran	66	(30 - 150)	SW846 8270C
Benzo(ghi)perylene	77	(30 - 150)	SW846 8270C
Dibenzo(a,e)pyrene	77	(30 - 150)	SW846 8270C
Dibenzo(a,i)pyrene	71	(30 - 150)	SW846 8270C
Dibenzo(a,h)pyrene	54	(30 - 150)	SW846 8270C
Dibenzo(a,l)pyrene	68	(30 - 150)	SW846 8270C
Benzo(a)pyrene	76	(30 - 150)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	42	(30 - 150)	SW846 8270C
2,6-Dimethylnaphthalene	73	(30 - 150)	SW846 8270C
Benzo(e)pyrene	80	(30 - 150)	SW846 8270C
Benzo(b)thiophene	72	(30 - 150)	SW846 8270C
3-Methylcholanthrene	66	(30 - 150)	SW846 8270C
6-Methylchrysene	75	(30 - 150)	SW846 8270C
1-Methylphenanthrene	75	(30 - 150)	SW846 8270C
Biphenyl	74	(30 - 150)	SW846 8270C
Carbazole	81	(30 - 150)	SW846 8270C
2,3,5-Trimethylnaphthalen	76	(30 - 150)	SW846 8270C
Chrysene	80	(43 - 124)	SW846 8270C
Dibenzo(a,h)anthracene	78	(30 - 150)	SW846 8270C
Dibenzofuran	78	(30 - 150)	SW846 8270C
Dibenzothiophene	80	(30 - 150)	SW846 8270C
2,3-Dihydroindene	58	(30 - 150)	SW846 8270C
Fluoranthene	79	(30 - 150)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4VL1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E150000-221

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**74**	**(51 - 120)**	**SW846 8270C**
Indene	**63**	**(49 - 108)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**76**	**(30 - 150)**	**SW846 8270C**
Indole	**71**	**(30 - 150)**	**SW846 8270C**
2-Methylnaphthalene	**67**	**(47 - 138)**	**SW846 8270C**
1-Methylnaphthalene	**68**	**(30 - 150)**	**SW846 8270C**
Naphthalene	**70**	**(43 - 128)**	**SW846 8270C**
Perylene	**78**	**(30 - 150)**	**SW846 8270C**
Phenanthrene	**78**	**(30 - 150)**	**SW846 8270C**
Pyrene	**79**	**(30 - 150)**	**SW846 8270C**
Quinoline	**67**	**(40 - 126)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(30 - 160)
Fluorene d-10	65	(36 - 127)
Naphthalene-d8	67	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 Work Order #...: LC4VL1AC Matrix.....: WATER
LCS Lot-Sample#: D9E150000-221
Prep Date.....: 05/15/09 Analysis Date..: 06/02/09
Prep Batch #...: 9135221 Analysis Time..: 17:16
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	50.0	36.1	ug/L	72	SW846 8270C
Acenaphthylene	50.0	36.3	ug/L	73	SW846 8270C
Acridine	50.0	35.3	ug/L	71	SW846 8270C
Anthracene	50.0	38.0	ug/L	76	SW846 8270C
Benzo(a)anthracene	50.0	38.7	ug/L	77	SW846 8270C
Benzo(b)fluoranthene	50.0	37.0	ug/L	74	SW846 8270C
Benzo(k)fluoranthene	50.0	39.3	ug/L	79	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	35.9	ug/L	72	SW846 8270C
Dibenz(a,h)acridine	50.0	40.7	ug/L	81	SW846 8270C
Dibenz(a,j)acridine	50.0	34.1	ug/L	68	SW846 8270C
2,3-Benzofuran	50.0	32.9	ug/L	66	SW846 8270C
Benzo(ghi)perylene	50.0	38.4	ug/L	77	SW846 8270C
Dibenzo(a,e)pyrene	50.0	38.5	ug/L	77	SW846 8270C
Dibenzo(a,i)pyrene	50.0	35.4	ug/L	71	SW846 8270C
Dibenzo(a,h)pyrene	50.0	27.2	ug/L	54	SW846 8270C
Dibenzo(a,l)pyrene	50.0	33.8	ug/L	68	SW846 8270C
Benzo(a)pyrene	50.0	38.1	ug/L	76	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	21.0	ug/L	42	SW846 8270C
2,6-Dimethylnaphthalene	50.0	36.4	ug/L	73	SW846 8270C
Benzo(e)pyrene	50.0	40.0	ug/L	80	SW846 8270C
Benzo(b)thiophene	50.0	36.1	ug/L	72	SW846 8270C
3-Methylcholanthrene	50.0	33.2	ug/L	66	SW846 8270C
6-Methylchrysene	50.0	37.4	ug/L	75	SW846 8270C
1-Methylphenanthrene	50.0	37.3	ug/L	75	SW846 8270C
Biphenyl	50.0	37.0	ug/L	74	SW846 8270C
Carbazole	50.0	40.7	ug/L	81	SW846 8270C
2,3,5-Trimethylnaphthalen	50.0	38.1	ug/L	76	SW846 8270C
Chrysene	50.0	40.1	ug/L	80	SW846 8270C
Dibenzo(a,h)anthracene	50.0	38.9	ug/L	78	SW846 8270C
Dibenzofuran	50.0	38.8	ug/L	78	SW846 8270C
Dibenzothiophene	50.0	39.9	ug/L	80	SW846 8270C
2,3-Dihydroindene	50.0	29.0	ug/L	58	SW846 8270C
Fluoranthene	50.0	39.4	ug/L	79	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4VL1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9E150000-221

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**50.0**	**37.2**	**ug/L**	**74**	**SW846 8270C**
Indene	**50.0**	**31.5**	**ug/L**	**63**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**50.0**	**38.2**	**ug/L**	**76**	**SW846 8270C**
Indole	**50.0**	**35.7**	**ug/L**	**71**	**SW846 8270C**
2-Methylnaphthalene	**50.0**	**33.7**	**ug/L**	**67**	**SW846 8270C**
1-Methylnaphthalene	**50.0**	**34.2**	**ug/L**	**68**	**SW846 8270C**
Naphthalene	**50.0**	**35.1**	**ug/L**	**70**	**SW846 8270C**
Perylene	**50.0**	**39.1**	**ug/L**	**78**	**SW846 8270C**
Phenanthrene	**50.0**	**39.1**	**ug/L**	**78**	**SW846 8270C**
Pyrene	**50.0**	**39.5**	**ug/L**	**79**	**SW846 8270C**
Quinoline	**50.0**	**33.3**	**ug/L**	**67**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	72	(30 - 160)
Fluorene d-10	65	(36 - 127)
Naphthalene-d8	67	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC0E91AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E130273-007 LC0E91AD-MSD
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 22:25
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	73	(30 - 150)			SW846 8270C
	68	(30 - 150)	21	(0-30)	SW846 8270C
Acenaphthylene	76	(30 - 150)			SW846 8270C
	68	(30 - 150)	25	(0-30)	SW846 8270C
Acridine	83	(30 - 150)			SW846 8270C
	81	(30 - 150)	18	(0-30)	SW846 8270C
Anthracene	81	(30 - 150)			SW846 8270C
	76	(30 - 150)	22	(0-30)	SW846 8270C
Benzo(a)anthracene	84	(30 - 150)			SW846 8270C
	78	(30 - 150)	22	(0-30)	SW846 8270C
Benzo(b)fluoranthene	78	(30 - 150)			SW846 8270C
	73	(30 - 150)	22	(0-30)	SW846 8270C
Benzo(k)fluoranthene	80	(30 - 150)			SW846 8270C
	74	(30 - 150)	23	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	83	(30 - 150)			SW846 8270C
	74	(30 - 150)	26	(0-30)	SW846 8270C
Dibenz(a,h)acridine	90	(30 - 150)			SW846 8270C
	82	(30 - 150)	24	(0-30)	SW846 8270C
Dibenz(a,j)acridine	85	(30 - 150)			SW846 8270C
	76	(30 - 150)	26	(0-30)	SW846 8270C
2,3-Benzofuran	60	(30 - 150)			SW846 8270C
	56	(30 - 150)	23	(0-30)	SW846 8270C
Benzo(ghi)perylene	82	(30 - 150)			SW846 8270C
	75	(30 - 150)	24	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	87	(30 - 150)			SW846 8270C
	79	(30 - 150)	25	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	85	(30 - 150)			SW846 8270C
	77	(30 - 150)	26	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	79	(30 - 150)			SW846 8270C
	64 p	(30 - 150)	37	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	82	(30 - 150)			SW846 8270C
	75	(30 - 150)	24	(0-30)	SW846 8270C
Benzo(a)pyrene	83	(30 - 150)			SW846 8270C
	76	(30 - 150)	23	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	46	(30 - 150)			SW846 8270C
	45	(30 - 150)	18	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	74	(30 - 150)			SW846 8270C
	67	(30 - 150)	24	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC0E91AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E130273-007 LC0E91AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	83	(30 - 150)			SW846 8270C
	77	(30 - 150)	23	(0-30)	SW846 8270C
Benzo(b)thiophene	68	(30 - 150)			SW846 8270C
	62	(30 - 150)	25	(0-30)	SW846 8270C
3-Methylcholanthrene	80	(30 - 150)			SW846 8270C
	73	(30 - 150)	25	(0-30)	SW846 8270C
6-Methylchrysene	80	(30 - 150)			SW846 8270C
	74	(30 - 150)	23	(0-30)	SW846 8270C
1-Methylphenanthrene	79	(30 - 150)			SW846 8270C
	74	(30 - 150)	21	(0-30)	SW846 8270C
Biphenyl	74	(30 - 150)			SW846 8270C
	67	(30 - 150)	25	(0-30)	SW846 8270C
Carbazole	85	(30 - 150)			SW846 8270C
	83	(30 - 150)	18	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	79	(30 - 150)			SW846 8270C
	74	(30 - 150)	22	(0-30)	SW846 8270C
Chrysene	80	(43 - 124)			SW846 8270C
	75	(43 - 124)	22	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	84	(30 - 150)			SW846 8270C
	77	(30 - 150)	23	(0-30)	SW846 8270C
Dibenzofuran	79	(30 - 150)			SW846 8270C
	74	(30 - 150)	22	(0-30)	SW846 8270C
Dibenzothiophene	84	(30 - 150)			SW846 8270C
	80	(30 - 150)	20	(0-30)	SW846 8270C
2,3-Dihydroindene	58	(30 - 150)			SW846 8270C
	54	(30 - 150)	23	(0-30)	SW846 8270C
Fluoranthene	84	(30 - 150)			SW846 8270C
	79	(30 - 150)	21	(0-30)	SW846 8270C
Fluorene	77	(51 - 120)			SW846 8270C
	73	(51 - 120)	21	(0-30)	SW846 8270C
Indene	60	(49 - 108)			SW846 8270C
	55	(49 - 108)	24	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	82	(30 - 150)			SW846 8270C
	76	(30 - 150)	23	(0-30)	SW846 8270C
Indole	50	(30 - 150)			SW846 8270C
	44	(30 - 150)	27	(0-30)	SW846 8270C
2-Methylnaphthalene	67	(47 - 138)			SW846 8270C
	60	(47 - 138)	25	(0-30)	SW846 8270C
1-Methylnaphthalene	67	(30 - 150)			SW846 8270C
	61	(30 - 150)	25	(0-30)	SW846 8270C
Naphthalene	67	(43 - 128)			SW846 8270C
	62	(43 - 128)	24	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC0E91AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E130273-007 LC0E91AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**80**	**(30 - 150)**			**SW846 8270C**
	74	**(30 - 150)**	**22**	**(0-30)**	**SW846 8270C**
Phenanthrene	**81**	**(30 - 150)**			**SW846 8270C**
	77	**(30 - 150)**	**20**	**(0-30)**	**SW846 8270C**
Pyrene	**84**	**(30 - 150)**			**SW846 8270C**
	79	**(30 - 150)**	**22**	**(0-30)**	**SW846 8270C**
Quinoline	**72**	**(40 - 126)**			**SW846 8270C**
	68	**(40 - 126)**	**22**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	73	(30 - 160)
	60	(30 - 160)
Fluorene d-10	68	(36 - 127)
	64	(36 - 127)
Naphthalene-d8	60	(37 - 107)
	56	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC0E91AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E130273-007 LC0E91AD-MSD
Date Sampled...: 05/12/09 **Date Received..:** 05/13/09
Prep Date.....: 05/15/09 **Analysis Date..:** 06/02/09
Prep Batch #...: 9135221 **Analysis Time..:** 22:25
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	56.4	41.0	ug/L	73		SW846 8270C
	ND	48.4	33.1	ug/L	68	21	SW846 8270C
Acenaphthylene	ND	56.4	42.6	ug/L	76		SW846 8270C
	ND	48.4	33.1	ug/L	68	25	SW846 8270C
Acridine	ND	56.4	47.0	ug/L	83		SW846 8270C
	ND	48.4	39.0	ug/L	81	18	SW846 8270C
Anthracene	ND	56.4	45.8	ug/L	81		SW846 8270C
	ND	48.4	36.7	ug/L	76	22	SW846 8270C
Benzo(a)anthracene	ND	56.4	47.3	ug/L	84		SW846 8270C
	ND	48.4	37.8	ug/L	78	22	SW846 8270C
Benzo(b)fluoranthene	ND	56.4	44.0	ug/L	78		SW846 8270C
	ND	48.4	35.3	ug/L	73	22	SW846 8270C
Benzo(k)fluoranthene	ND	56.4	44.8	ug/L	80		SW846 8270C
	ND	48.4	35.6	ug/L	74	23	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	56.4	46.6	ug/L	83		SW846 8270C
	ND	48.4	36.0	ug/L	74	26	SW846 8270C
Dibenz(a,h)acridine	ND	56.4	51.0	ug/L	90		SW846 8270C
	ND	48.4	39.9	ug/L	82	24	SW846 8270C
Dibenz(a,j)acridine	ND	56.4	48.1	ug/L	85		SW846 8270C
	ND	48.4	37.0	ug/L	76	26	SW846 8270C
2,3-Benzofuran	ND	56.4	34.1	ug/L	60		SW846 8270C
	ND	48.4	26.9	ug/L	56	23	SW846 8270C
Benzo(ghi)perylene	ND	56.4	46.3	ug/L	82		SW846 8270C
	ND	48.4	36.5	ug/L	75	24	SW846 8270C
Dibenzo(a,e)pyrene	ND	56.4	49.2	ug/L	87		SW846 8270C
	ND	48.4	38.3	ug/L	79	25	SW846 8270C
Dibenzo(a,i)pyrene	ND	56.4	48.0	ug/L	85		SW846 8270C
	ND	48.4	37.0	ug/L	77	26	SW846 8270C
Dibenzo(a,h)pyrene	ND	56.4	44.6	ug/L	79		SW846 8270C
	ND	48.4	30.8	ug/L	64 p	37	SW846 8270C
Dibenzo(a,l)pyrene	ND	56.4	46.3	ug/L	82		SW846 8270C
	ND	48.4	36.3	ug/L	75	24	SW846 8270C
Benzo(a)pyrene	ND	56.4	46.6	ug/L	83		SW846 8270C
	ND	48.4	37.0	ug/L	76	23	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	56.4	26.0	ug/L	46		SW846 8270C
	ND	48.4	21.7	ug/L	45	18	SW846 8270C
2,6-Dimethylnaphthalene	ND	56.4	41.6	ug/L	74		SW846 8270C
	ND	48.4	32.6	ug/L	67	24	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC0E91AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E130273-007 LC0E91AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	56.4	47.1	ug/L	83		SW846 8270C
	ND	48.4	37.3	ug/L	77	23	SW846 8270C
Benzo(b)thiophene	ND	56.4	38.5	ug/L	68		SW846 8270C
	ND	48.4	30.0	ug/L	62	25	SW846 8270C
3-Methylcholanthrene	ND	56.4	45.2	ug/L	80		SW846 8270C
	ND	48.4	35.2	ug/L	73	25	SW846 8270C
6-Methylchrysene	ND	56.4	45.1	ug/L	80		SW846 8270C
	ND	48.4	36.0	ug/L	74	23	SW846 8270C
1-Methylphenanthrene	ND	56.4	44.5	ug/L	79		SW846 8270C
	ND	48.4	35.9	ug/L	74	21	SW846 8270C
Biphenyl	ND	56.4	41.9	ug/L	74		SW846 8270C
	ND	48.4	32.6	ug/L	67	25	SW846 8270C
Carbazole	ND	56.4	48.0	ug/L	85		SW846 8270C
	ND	48.4	40.3	ug/L	83	18	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	56.4	44.6	ug/L	79		SW846 8270C
	ND	48.4	35.6	ug/L	74	22	SW846 8270C
Chrysene	ND	56.4	45.2	ug/L	80		SW846 8270C
	ND	48.4	36.2	ug/L	75	22	SW846 8270C
Dibenzo(a,h)anthracene	ND	56.4	47.3	ug/L	84		SW846 8270C
	ND	48.4	37.4	ug/L	77	23	SW846 8270C
Dibenzofuran	ND	56.4	44.7	ug/L	79		SW846 8270C
	ND	48.4	36.0	ug/L	74	22	SW846 8270C
Dibenzothiophene	ND	56.4	47.1	ug/L	84		SW846 8270C
	ND	48.4	38.7	ug/L	80	20	SW846 8270C
2,3-Dihydroindene	ND	56.4	32.9	ug/L	58		SW846 8270C
	ND	48.4	26.0	ug/L	54	23	SW846 8270C
Fluoranthene	ND	56.4	47.4	ug/L	84		SW846 8270C
	ND	48.4	38.3	ug/L	79	21	SW846 8270C
Fluorene	ND	56.4	43.3	ug/L	77		SW846 8270C
	ND	48.4	35.1	ug/L	73	21	SW846 8270C
Indene	ND	56.4	34.0	ug/L	60		SW846 8270C
	ND	48.4	26.7	ug/L	55	24	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	56.4	46.3	ug/L	82		SW846 8270C
	ND	48.4	36.8	ug/L	76	23	SW846 8270C
Indole	ND	56.4	28.0	ug/L	50		SW846 8270C
	ND	48.4	21.2	ug/L	44	27	SW846 8270C
2-Methylnaphthalene	ND	56.4	37.7	ug/L	67		SW846 8270C
	ND	48.4	29.2	ug/L	60	25	SW846 8270C
1-Methylnaphthalene	ND	56.4	37.9	ug/L	67		SW846 8270C
	ND	48.4	29.4	ug/L	61	25	SW846 8270C
Naphthalene	ND	56.4	38.0	ug/L	67		SW846 8270C
	ND	48.4	29.9	ug/L	62	24	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC0E91AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9E130273-007 LC0E91AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**56.4**	**45.1**	**ug/L**	**80**		**SW846 8270C**
	ND	**48.4**	**36.0**	**ug/L**	**74**	**22**	**SW846 8270C**
Phenanthrene	**ND**	**56.4**	**45.7**	**ug/L**	**81**		**SW846 8270C**
	ND	**48.4**	**37.3**	**ug/L**	**77**	**20**	**SW846 8270C**
Pyrene	**ND**	**56.4**	**47.3**	**ug/L**	**84**		**SW846 8270C**
	ND	**48.4**	**38.1**	**ug/L**	**79**	**22**	**SW846 8270C**
Quinoline	**ND**	**56.4**	**40.7**	**ug/L**	**72**		**SW846 8270C**
	ND	**48.4**	**32.7**	**ug/L**	**68**	**22**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	73	(30 - 160)
	60	(30 - 160)
Fluorene d-10	68	(36 - 127)
	64	(36 - 127)
Naphthalene-d8	60	(37 - 107)
	56	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4KH1AA **Matrix.....:** WATER
MB Lot-Sample #: D9E150000-172

Prep Date.....: 05/15/09 **Analysis Time..:** 22:59
Analysis Date..: 06/01/09 **Prep Batch #...:** 9135172
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	20 *	(28 - 101)
Fluorene d-10	8.7 *	(23 - 84)
Naphthalene-d8	9.2 *	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 Work Order #...: LC4KH1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9E150000-172 LC4KH1AD-LCSD
Prep Date.....: 05/15/09 Analysis Date..: 06/01/09
Prep Batch #...: 9135172 Analysis Time..: 23:35
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	59	(30 - 150)			SW846 8270C SIM
	59	(30 - 150)	1.1	(0-50)	SW846 8270C SIM
Acenaphthylene	52	(30 - 150)			SW846 8270C SIM
	52	(30 - 150)	0.12	(0-50)	SW846 8270C SIM
Acridine	34	(30 - 150)			SW846 8270C SIM
	40	(30 - 150)	17	(0-50)	SW846 8270C SIM
Anthracene	52	(30 - 150)			SW846 8270C SIM
	53	(30 - 150)	1.7	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	59	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	2.6	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	58	(30 - 150)			SW846 8270C SIM
	61	(30 - 150)	5.9	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	59	(30 - 150)			SW846 8270C SIM
	61	(30 - 150)	2.7	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	60	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	3.9	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	65	(30 - 150)			SW846 8270C SIM
	64	(30 - 150)	1.2	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	55	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	4.6	(0-50)	SW846 8270C SIM
2,3-Benzofuran	54	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	1.2	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	58	(30 - 150)			SW846 8270C SIM
	60	(30 - 150)	3.7	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	45	(30 - 150)			SW846 8270C SIM
	51	(30 - 150)	12	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	34	(30 - 150)			SW846 8270C SIM
	39	(30 - 150)	13	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	3.4 a	(30 - 150)			SW846 8270C SIM
	14 a,p	(30 - 150)	121	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	36	(30 - 150)			SW846 8270C SIM
	43	(30 - 150)	16	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	56	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	2.7	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	27 a	(30 - 150)			SW846 8270C SIM
	49 p	(30 - 150)	59	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	58	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	0.16	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4KH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E150000-172 LC4KH1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	59	(37 - 105)			SW846 8270C SIM
	60	(37 - 105)	1.6	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	56	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	1.8	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	8.8 a	(30 - 150)			SW846 8270C SIM
	44 p	(30 - 150)	133	(0-50)	SW846 8270C SIM
6-Methylchrysene	54	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	3.0	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	54	(30 - 150)			SW846 8270C SIM
	53	(30 - 150)	0.17	(0-50)	SW846 8270C SIM
Biphenyl	59	(30 - 150)			SW846 8270C SIM
	59	(30 - 150)	0.47	(0-50)	SW846 8270C SIM
Carbazole	65	(30 - 150)			SW846 8270C SIM
	65	(30 - 150)	0.96	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	49	(30 - 150)			SW846 8270C SIM
	49	(30 - 150)	0.41	(0-50)	SW846 8270C SIM
Chrysene	59	(20 - 136)			SW846 8270C SIM
	59	(20 - 136)	0.20	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	52	(30 - 150)			SW846 8270C SIM
	59	(30 - 150)	12	(0-50)	SW846 8270C SIM
Dibenzofuran	63	(30 - 150)			SW846 8270C SIM
	64	(30 - 150)	2.4	(0-50)	SW846 8270C SIM
Dibenzothiophene	57	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	2.3	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	53	(30 - 150)			SW846 8270C SIM
	51	(30 - 150)	3.8	(0-50)	SW846 8270C SIM
Fluoranthene	55	(30 - 150)			SW846 8270C SIM
	54	(30 - 150)	1.9	(0-50)	SW846 8270C SIM
Fluorene	53	(34 - 96)			SW846 8270C SIM
	53	(34 - 96)	1.4	(0-50)	SW846 8270C SIM
Indene	53	(22 - 86)			SW846 8270C SIM
	53	(22 - 86)	0.72	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	57	(30 - 150)			SW846 8270C SIM
	59	(30 - 150)	4.5	(0-50)	SW846 8270C SIM
Indole	57	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	4.2	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	57	(25 - 95)			SW846 8270C SIM
	57	(25 - 95)	0.090	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	57	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	0.56	(0-50)	SW846 8270C SIM
Naphthalene	56	(27 - 95)			SW846 8270C SIM
	56	(27 - 95)	0.68	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4KH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E150000-172 LC4KH1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**50**	**(30 - 150)**			**SW846 8270C SIM**
	39	**(30 - 150)**	**25**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**60**	**(30 - 150)**			**SW846 8270C SIM**
	61	**(30 - 150)**	**1.5**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**53**	**(30 - 150)**			**SW846 8270C SIM**
	52	**(30 - 150)**	**1.4**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**56**	**(20 - 112)**			**SW846 8270C SIM**
	59	**(20 - 112)**	**4.5**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	54	(28 - 101)
	54	(28 - 101)
Fluorene d-10	47	(23 - 84)
	48	(23 - 84)
Naphthalene-d8	52	(22 - 97)
	53	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4KH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E150000-172 LC4KH1AD-LCSD
Prep Date.....: 05/15/09 **Analysis Date..:** 06/01/09
Prep Batch #...: 9135172 **Analysis Time..:** 23:35
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	75.0	44.1	ng/L	59		SW846 8270C SIM
	75.0	44.6	ng/L	59	1.1	SW846 8270C SIM
Acenaphthylene	75.0	39.2	ng/L	52		SW846 8270C SIM
	75.0	39.3	ng/L	52	0.12	SW846 8270C SIM
Acridine	75.0	25.3	ng/L	34		SW846 8270C SIM
	75.0	30.0	ng/L	40	17	SW846 8270C SIM
Anthracene	75.0	38.8	ng/L	52		SW846 8270C SIM
	75.0	39.5	ng/L	53	1.7	SW846 8270C SIM
Benzo(a)anthracene	75.0	44.0	ng/L	59		SW846 8270C SIM
	75.0	42.9	ng/L	57	2.6	SW846 8270C SIM
Benzo(b)fluoranthene	75.0	43.4	ng/L	58		SW846 8270C SIM
	75.0	46.0	ng/L	61	5.9	SW846 8270C SIM
Benzo(k)fluoranthene	75.0	44.6	ng/L	59		SW846 8270C SIM
	75.0	45.8	ng/L	61	2.7	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	75.0	45.0	ng/L	60		SW846 8270C SIM
	75.0	43.3	ng/L	58	3.9	SW846 8270C SIM
Dibenz(a,h)acridine	75.0	48.4	ng/L	65		SW846 8270C SIM
	75.0	47.9	ng/L	64	1.2	SW846 8270C SIM
Dibenz(a,j)acridine	75.0	40.9	ng/L	55		SW846 8270C SIM
	75.0	42.8	ng/L	57	4.6	SW846 8270C SIM
2,3-Benzofuran	75.0	40.8	ng/L	54		SW846 8270C SIM
	75.0	41.3	ng/L	55	1.2	SW846 8270C SIM
Benzo(ghi)perylene	75.0	43.5	ng/L	58		SW846 8270C SIM
	75.0	45.1	ng/L	60	3.7	SW846 8270C SIM
Dibenzo(a,e)pyrene	75.0	34.1	ng/L	45		SW846 8270C SIM
	75.0	38.3	ng/L	51	12	SW846 8270C SIM
Dibenzo(a,i)pyrene	75.0	25.4	ng/L	34		SW846 8270C SIM
	75.0	28.9	ng/L	39	13	SW846 8270C SIM
Dibenzo(a,h)pyrene	75.0	2.52 a	ng/L	3.4		SW846 8270C SIM
	75.0	10.2 a,p	ng/L	14	121	SW846 8270C SIM
Dibenzo(a,l)pyrene	75.0	27.2	ng/L	36		SW846 8270C SIM
	75.0	32.0	ng/L	43	16	SW846 8270C SIM
Benzo(a)pyrene	75.0	42.1	ng/L	56		SW846 8270C SIM
	75.0	43.2	ng/L	58	2.7	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	75.0	20.0 a	ng/L	27		SW846 8270C SIM
	75.0	36.6 p	ng/L	49	59	SW846 8270C SIM
2,6-Dimethylnaphthalene	75.0	43.3	ng/L	58		SW846 8270C SIM
	75.0	43.2	ng/L	58	0.16	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4KH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E150000-172 LC4KH1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzo(e)pyrene	75.0	44.4	ng/L	59		SW846 8270C SIM
	75.0	45.1	ng/L	60	1.6	SW846 8270C SIM
Benzo(b)thiophene	75.0	42.0	ng/L	56		SW846 8270C SIM
	75.0	42.8	ng/L	57	1.8	SW846 8270C SIM
3-Methylcholanthrene	75.0	6.60 a	ng/L	8.8		SW846 8270C SIM
	75.0	32.8 p	ng/L	44	133	SW846 8270C SIM
6-Methylchrysene	75.0	40.6	ng/L	54		SW846 8270C SIM
	75.0	41.8	ng/L	56	3.0	SW846 8270C SIM
1-Methylphenanthrene	75.0	40.2	ng/L	54		SW846 8270C SIM
	75.0	40.1	ng/L	53	0.17	SW846 8270C SIM
Biphenyl	75.0	44.4	ng/L	59		SW846 8270C SIM
	75.0	44.6	ng/L	59	0.47	SW846 8270C SIM
Carbazole	75.0	48.5	ng/L	65		SW846 8270C SIM
	75.0	49.0	ng/L	65	0.96	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	75.0	36.6	ng/L	49		SW846 8270C SIM
	75.0	36.4	ng/L	49	0.41	SW846 8270C SIM
Chrysene	75.0	44.6	ng/L	59		SW846 8270C SIM
	75.0	44.5	ng/L	59	0.20	SW846 8270C SIM
Dibenzo(a,h)anthracene	75.0	39.4	ng/L	52		SW846 8270C SIM
	75.0	44.6	ng/L	59	12	SW846 8270C SIM
Dibenzofuran	75.0	47.1	ng/L	63		SW846 8270C SIM
	75.0	48.3	ng/L	64	2.4	SW846 8270C SIM
Dibenzothiophene	75.0	42.6	ng/L	57		SW846 8270C SIM
	75.0	43.6	ng/L	58	2.3	SW846 8270C SIM
2,3-Dihydroindene	75.0	40.0	ng/L	53		SW846 8270C SIM
	75.0	38.4	ng/L	51	3.8	SW846 8270C SIM
Fluoranthene	75.0	41.3	ng/L	55		SW846 8270C SIM
	75.0	40.5	ng/L	54	1.9	SW846 8270C SIM
Fluorene	75.0	39.4	ng/L	53		SW846 8270C SIM
	75.0	40.0	ng/L	53	1.4	SW846 8270C SIM
Indene	75.0	40.0	ng/L	53		SW846 8270C SIM
	75.0	39.7	ng/L	53	0.72	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	75.0	42.5	ng/L	57		SW846 8270C SIM
	75.0	44.4	ng/L	59	4.5	SW846 8270C SIM
Indole	75.0	43.1	ng/L	57		SW846 8270C SIM
	75.0	41.3	ng/L	55	4.2	SW846 8270C SIM
2-Methylnaphthalene	75.0	42.6	ng/L	57		SW846 8270C SIM
	75.0	42.5	ng/L	57	0.090	SW846 8270C SIM
1-Methylnaphthalene	75.0	42.6	ng/L	57		SW846 8270C SIM
	75.0	42.8	ng/L	57	0.56	SW846 8270C SIM
Naphthalene	75.0	42.0	ng/L	56		SW846 8270C SIM
	75.0	42.2	ng/L	56	0.68	SW846 8270C SIM

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9E130273 **Work Order #...:** LC4KH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9E150000-172 LC4KH1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Perylene	**75.0**	**37.2**	**ng/L**	**50**		**SW846 8270C SIM**
	75.0	**28.9**	**ng/L**	**39**	**25**	**SW846 8270C SIM**
Phenanthrene	**75.0**	**45.0**	**ng/L**	**60**		**SW846 8270C SIM**
	75.0	**45.7**	**ng/L**	**61**	**1.5**	**SW846 8270C SIM**
Pyrene	**75.0**	**39.8**	**ng/L**	**53**		**SW846 8270C SIM**
	75.0	**39.3**	**ng/L**	**52**	**1.4**	**SW846 8270C SIM**
Quinoline	**75.0**	**42.0**	**ng/L**	**56**		**SW846 8270C SIM**
	75.0	**44.0**	**ng/L**	**59**	**4.5**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	54	(28 - 101)
	54	(28 - 101)
Fluorene d-10	47	(23 - 84)
	48	(23 - 84)
Naphthalene-d8	52	(22 - 97)
	53	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

2.5 AG
2.7 IRI
2.6 5/13/09

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: City of St. Louis Park	Project Manager: Scott Anderson	Date: 5-12-2009	Chain of Custody Number: 150798
Address: 3752 Wooddale Ave	Telephone Number (Area Code)/Fax Number: (952) 924-2557	Lab Number:	Page 1 of 1
City: St Louis Park / State: MN / Zip Code: 55416	Site Contact: A. Tarara	Lab Contact: Lisa Uriell	
Project Name and Location (State): Reilly (MN)	Carrier/Waybill Number: Fed Ex / 8692-6052-5220		
Contract/Purchase Order/Quote No.: 01620-037-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH-PPB	PAH-PPT 5	Special Instructions/ Conditions of Receipt
W122-051209	051209	0910		X									2	6	
W433-051209		1150		X									2		
W433DUP-051209		1120		X									2		
W433FB-051209		1110		X									2		
W433FBD-051209		1105		X									2		
W143-051209		1215		X									2		
W120-051209		1300		X									2		
W120MS-051209		1301		X									2		Matrix Spike
W120MSD-051209		1302		X									2		Matrix Spike Dupl.
W438-051209		1500		X									2		
W101-051209		1545		X									2		
W409-051209	↓	1710		X									2		

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: [ ] 24 Hours [ ] 48 Hours [ ] 7 Days [ ] 14 Days [ ] 21 Days [ ] Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	5/12/09	1730	1. Received By	5/13/09	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

AECOM Environment
2 Technology Park Drive, Westford, MA 01886
T 978.589.3000 F 978.589.3035 www.aecom.com

Memorandum

Date: March 7, 2010

To: Bill Gregg

From: Linda Adams/Westford

Subject: Data Validation
PPB/PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9E130273
Appendix H

Distribution: R. Kennedy/Westford

60145681 File
SA037pahlms

SUMMARY

Full validation was performed on the data for the analysis of seven aqueous samples and two field blanks for part per billion (ppb) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C and for one aqueous sample for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C, selected ion monitoring (SIM) method. The samples were collected on May 12, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9E130273.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. The nondetect results for all compounds in sample W122-051209 were rejected due to surrogate recoveries <10%. Selected other data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W122-051209	W143-051209
W20-051209	W438-051209
W101-051209	W409-051209
W433-051209	W433DUP-051209 (Field duplicate of W433-051209)

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Sample IDs	Sample IDs
W433FB-051209 (Field blank)	W433FBD-051209 (Field blank duplicate)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectrometry (GC/MS) tuning
- Initial and continuing calibrations
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Internal standard performance
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- Sample W20-051209 was listed on the COC as W120-051209. The bottles were labeled as W20-051209. Based on the sampling schedule, the sample was logged per the labels on the bottles. No validation action was taken on this basis.

The target compounds for the samples in this data set are listed on Worksheet #15 of the project specific QAPP. The following discrepancies were noted.

- The laboratory was unable to report the results for benzo(j)fluoranthene since this compound co-elutes with either benzo(k)fluoranthene or benzo(b)fluoranthene. Benzo(b)fluoranthene and benzo(k)fluoranthene were not detected in any samples. Qualification of the data on this basis was not required.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

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GC/MS Tuning

The frequency and abundance of the decafluorotriphenylphosphine (DFTPP) tuning results were within the QC acceptance criteria. All samples were analyzed within 12 hours from the DFTPP tuning.

The method acceptance limits were met regarding the evaluation of DDT, pentachlorophenol, and benzidine degradation and/or tailing.

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs) and the response factors (RFs) of all target compounds in the initial calibration and the percent differences (%Ds) and the RFs in the continuing calibrations associated with all sample analyses were within the QC acceptance criteria with the following exceptions.

Calibration	Compound	%RSD (IC)	Actions (Detects/Nondetects)
IC 5/12/09	Naphthalene	16.6	J/UJ
Associated samples: All samples in this sample set except sample W122-051209			
IC 5/08/09	Acridine	22.8	J/UJ
	Benzo(a)pyrene*	16.6	J/UJ
Associated sample: Sample W122-051209			

*It should be noted that the nondetect result for benzo(a)pyrene in sample W122-051209 was rejected due to surrogate nonconformances as noted below.

Laboratory Blanks/Field Blanks

Target compounds were not detected in the laboratory method blanks or in the field blank (W433FB-051209) or the field blank duplicate (W433FBD-051209).

Surrogate Spike Recoveries

The surrogate recoveries were within the QC acceptance criteria in all sample analyses with the following exception.

Sample ID	Surrogate			Actions	
	Chrysene-d12	Fluorene-d10	Naphthalene-d8	Detects	Nondetects
W122-051209	7.9	ok	ok	J	R
QAPP QC Limits	**30-118**	**41-162**	**30-118**		

Internal Standard Performance

Internal standard performance met the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on sample W20-051209 from this data set. All target analytes were spiked. All percent recoveries (%Rs) and relative percent differences (RPDs) were within the QC

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acceptance criteria.

LCS/LCSD Results

All target analytes were spiked. The %Rs and/or RPDs were within the QC acceptance criteria for the LCS and/or LCSD analyses.

Field Duplicate Results

Samples W433-051209 and W433DUP-051209 were the field duplicate pair analyzed with this data set. Note that samples W433FB-051209 and W433FBD-051209 are not field samples and should not be considered representative of the sample matrix.

Target analytes were not detected in samples W433-051209 and W433DUP-051209 and W433FB-051209 and W433FBD-051209. The RPDs were therefore not calculable (NC). Precision was deemed acceptable.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted.

The QAPP specified reporting limits were met for all samples analyzed for ppb analysis. The following table summarizes the reporting limits which exceeded the QAPP specified reporting limits for ppt analysis.

Compound	QAPP RL (ng/L)	Lab RL (ng/L)
Acridine	6.2	6.5
Perylene	3.3	3.8

All samples were analyzed undiluted.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9H110178

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

August 20, 2009 (Original)
August 24, 2009 (Revision)

CASE NARRATIVE
D9H110178

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Thirteen samples plus one set of MS/MSD samples were received under chain of custody on August 11, 2009. The samples were received at temperatures of 4.1°C, 3.4°C and 4.8°C. All sample containers were received in acceptable condition, with the exception of the item noted below.

A sample collection time discrepancy was noted between the information listed on the Chain of Custody and the sample container labels for sample W427-081009. The Chain of Custody lists the collection time as 15:50, while the container labels list the collection time as 15:15. The collection time was logged per the Chain of Custody. The client was notified August 11, 2009.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

Samples W420-081009 and W439-081009 were analyzed at two different dilutions to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated, because the extracts were diluted beyond the ability to quantitate recoveries.

The Method Blank associated with QC batch 9224294 exhibited a surrogate recovery below the lower control limits for Naphthalene-d8 at 30% (limits 37-107%). Re-extraction of the associated samples was not possible due to insufficient remaining sample volume. All associated sample surrogates were recovered within the QC control limits. Therefore, the data is reported as is.

The MS/MSD associated with QC batch 9224294 was performed using sample W117-081009, as requested. The MS/MSD exhibited percent recoveries outside the control limits for 7,12-Dimethylbenz(a)anthracene and Indene. The MS/MSD exhibited Relative Percent Difference (RPD) data outside the control limits for 7,12-Dimethylbenz(a)anthracene. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

No other anomalies were noted.

Revision 1

In the original submission of this report, the LCS exhibited recoveries below the lower control limits for a number of compounds. The laboratory reanalyzed the LCS with a different curve after the report had been submitted. Upon reanalysis of the LCS, all compounds were recovered within the control limits. The reanalysis of the data has been reported in this submission.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9H110178
ANALYSIS: SW846-8270C

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	2
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	62
MS	7	6
MS Surrogates	3	3
MSD	7	7
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	39	39
Samples and QC Internal Standard Area	51	51
TOTAL	**254**	**252**
% Completeness	**99.2%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9H110178					
Sample: W117-081009		**DUP: W117D-081009**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	ND	Acenaphthene	ND	0.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	ND	2,3-Dihydroindene	ND	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	ND	Naphthalene	ND	0.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND. Considered acceptable if the positive

EXECUTIVE SUMMARY - Detection Highlights

D9H110178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
P307-081009 08/10/09 10:55 005				
Acenaphthene	13	10	ug/L	SW846 8270C
Carbazole	3.6 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	21	10	ug/L	SW846 8270C
Fluorene	3.3 J	10	ug/L	SW846 8270C
1-Methylnaphthalene	4.9 J	10	ug/L	SW846 8270C
P309-081009 08/10/09 13:10 006				
Acenaphthene	7.6 J	10	ug/L	SW846 8270C
Carbazole	2.6 J	10	ug/L	SW846 8270C
W420-081009 08/10/09 12:50 007				
Acenaphthene	160	100	ug/L	SW846 8270C
2,3-Benzofuran	33 J	100	ug/L	SW846 8270C
Benzo(b)thiophene	120	100	ug/L	SW846 8270C
Carbazole	92 J	100	ug/L	SW846 8270C
Dibenzofuran	56 J	100	ug/L	SW846 8270C
2,3-Dihydroindene	280	100	ug/L	SW846 8270C
Fluorene	58 J	100	ug/L	SW846 8270C
Indene	27 J	100	ug/L	SW846 8270C
2-Methylnaphthalene	150	100	ug/L	SW846 8270C
1-Methylnaphthalene	160	100	ug/L	SW846 8270C
Naphthalene	2300	200	ug/L	SW846 8270C
Phenanthrene	47 J	100	ug/L	SW846 8270C
W439-081009 08/10/09 13:55 012				
Acenaphthene	67	40	ug/L	SW846 8270C
Benzo(b)thiophene	53	40	ug/L	SW846 8270C
Carbazole	17 J	40	ug/L	SW846 8270C
2,3-Dihydroindene	210	40	ug/L	SW846 8270C
Fluorene	11 J	40	ug/L	SW846 8270C
Indene	44	40	ug/L	SW846 8270C
2-Methylnaphthalene	39 J	40	ug/L	SW846 8270C
1-Methylnaphthalene	78	40	ug/L	SW846 8270C
Naphthalene	780	100	ug/L	SW846 8270C
Phenanthrene	9.2 J	40	ug/L	SW846 8270C

METHODS SUMMARY

D9H110178

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9H110178

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Ashley Wolfe	004211

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9H110178

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LHX52	001	W117-081009	08/10/09	11:30
LHX6E	002	W117D-081009	08/10/09	11:35
LHX6K	003	W11FB-081009	08/10/09	11:20
LHX6M	004	W11FBD-081009	08/10/09	11:25
LHX6P	005	P307-081009	08/10/09	10:55
LHX6R	006	P309-081009	08/10/09	13:10
LHX6W	007	W420-081009	08/10/09	12:50
LHX6X	008	P112-081009	08/10/09	10:05
LHX60	009	P109-081009	08/10/09	10:30
LHX61	010	W427-081009	08/10/09	15:50
LHX62	011	P310-081009	08/10/09	14:35
LHX63	012	W439-081009	08/10/09	13:55
LHX65	013	P308-081009	08/10/09	13:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W117-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-001 **Work Order #...:** LHX521AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 11:15
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	83	(30 - 160)
Fluorene d-10	76	(36 - 127)
Naphthalene-d8	55	(37 - 107)

City of Saint Louis Park

Client Sample ID: W117D-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-002 **Work Order #...:** LHX6E1AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 13:02
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	93	(30 - 160)
Fluorene d-10	80	(36 - 127)
Naphthalene-d8	55	(37 - 107)

City of Saint Louis Park

Client Sample ID: W11FB-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-003 **Work Order #...:** LHX6K1AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 13:38
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	99	(30 - 160)
Fluorene d-10	84	(36 - 127)
Naphthalene-d8	82	(37 - 107)

City of Saint Louis Park

Client Sample ID: W11FBD-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-004 **Work Order #...:** LHX6M1AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 14:14
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	95	(30 - 160)
Fluorene d-10	79	(36 - 127)
Naphthalene-d8	75	(37 - 107)

City of Saint Louis Park

Client Sample ID: P307-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-005 **Work Order #...:** LHX6P1AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 14:50
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**13**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**3.6 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**21**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**3.3 J**	**10**	**ug/L**
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**4.9 J**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	93	(30 - 160)
Fluorene d-10	85	(36 - 127)
Naphthalene-d8	65	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: P309-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-006 **Work Order #...:** LHX6R1AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 15:26
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**7.6 J**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**2.6 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	58	(30 - 160)
Fluorene d-10	81	(36 - 127)
Naphthalene-d8	57	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-007 **Work Order #...:** LHX6W1AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 16:02
Dilution Factor: 10

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**160**	**100**	**ug/L**
Acenaphthylene	ND	100	ug/L
Acridine	ND	100	ug/L
Anthracene	ND	100	ug/L
Benzo(a)anthracene	ND	100	ug/L
Benzo(b)fluoranthene	ND	100	ug/L
Benzo(k)fluoranthene	ND	100	ug/L
2,3-Benzofuran	**33 J**	**100**	**ug/L**
Benzo(ghi)perylene	ND	100	ug/L
Benzo(a)pyrene	ND	100	ug/L
Benzo(e)pyrene	ND	100	ug/L
Benzo(b)thiophene	**120**	**100**	**ug/L**
Biphenyl	ND	100	ug/L
Carbazole	**92 J**	**100**	**ug/L**
Chrysene	ND	100	ug/L
Dibenzo(a,h)anthracene	ND	100	ug/L
Dibenzofuran	**56 J**	**100**	**ug/L**
Dibenzothiophene	ND	100	ug/L
2,3-Dihydroindene	**280**	**100**	**ug/L**
Fluoranthene	ND	100	ug/L
Fluorene	**58 J**	**100**	**ug/L**
Indene	**27 J**	**100**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	100	ug/L
Indole	ND	100	ug/L
2-Methylnaphthalene	**150**	**100**	**ug/L**
1-Methylnaphthalene	**160**	**100**	**ug/L**
Perylene	ND	100	ug/L
Phenanthrene	**47 J**	**100**	**ug/L**
Pyrene	ND	100	ug/L
Quinoline	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420-081009

GC/MS Semivolatiles

Lot-Sample #...:	D9H110178-007	**Work Order #...:**	LHX6W2AA	**Matrix.....:**	WG
Date Sampled...:	08/10/09	**Date Received..:**	08/11/09		
Prep Date.....:	08/12/09	**Analysis Date..:**	08/23/09		
Prep Batch #...:	9224294	**Analysis Time..:**	11:57		
Dilution Factor:	20				
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**2300**	**200**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: P112-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-008 **Work Order #...:** LHX6X1AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 16:39
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	94	(30 - 160)
Fluorene d-10	80	(36 - 127)
Naphthalene-d8	61	(37 - 107)

City of Saint Louis Park

Client Sample ID: P109-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-009 **Work Order #...:** LHX601AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 17:15
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	79	(36 - 127)
Naphthalene-d8	67	(37 - 107)

City of Saint Louis Park

Client Sample ID: W427-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-010 **Work Order #...:** LHX611AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 17:52
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	93	(30 - 160)
Fluorene d-10	82	(36 - 127)
Naphthalene-d8	75	(37 - 107)

City of Saint Louis Park

Client Sample ID: P310-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-011 **Work Order #...:** LHX621AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 18:28
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	62	(30 - 160)
Fluorene d-10	76	(36 - 127)
Naphthalene-d8	64	(37 - 107)

City of Saint Louis Park

Client Sample ID: W439-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-012 **Work Order #...:** LHX631AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/22/09
Prep Batch #...: 9224294 **Analysis Time..:** 19:05
Dilution Factor: 4

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**67**	**40**	**ug/L**
Acenaphthylene	ND	40	ug/L
Acridine	ND	40	ug/L
Anthracene	ND	40	ug/L
Benzo(a)anthracene	ND	40	ug/L
Benzo(b)fluoranthene	ND	40	ug/L
Benzo(k)fluoranthene	ND	40	ug/L
2,3-Benzofuran	ND	40	ug/L
Benzo(ghi)perylene	ND	40	ug/L
Benzo(a)pyrene	ND	40	ug/L
Benzo(e)pyrene	ND	40	ug/L
Benzo(b)thiophene	**53**	**40**	**ug/L**
Biphenyl	ND	40	ug/L
Carbazole	**17 J**	**40**	**ug/L**
Chrysene	ND	40	ug/L
Dibenzo(a,h)anthracene	ND	40	ug/L
Dibenzofuran	ND	40	ug/L
Dibenzothiophene	ND	40	ug/L
2,3-Dihydroindene	**210**	**40**	**ug/L**
Fluoranthene	ND	40	ug/L
Fluorene	**11 J**	**40**	**ug/L**
Indene	**44**	**40**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	40	ug/L
Indole	ND	40	ug/L
2-Methylnaphthalene	**39 J**	**40**	**ug/L**
1-Methylnaphthalene	**78**	**40**	**ug/L**
Perylene	ND	40	ug/L
Phenanthrene	**9.2 J**	**40**	**ug/L**
Pyrene	ND	40	ug/L
Quinoline	ND	40	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W439-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-012	**Work Order #...:** LHX632AA	**Matrix.....:** WG	
Date Sampled...: 08/10/09	**Date Received..:** 08/11/09		
Prep Date.....: 08/12/09	**Analysis Date..:** 08/23/09		
Prep Batch #...: 9224294	**Analysis Time..:** 12:33		
Dilution Factor: 10			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**780**	**100**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: P308-081009

GC/MS Semivolatiles

Lot-Sample #...: D9H110178-013 **Work Order #...:** LHX651AA **Matrix.....:** WG
Date Sampled...: 08/10/09 **Date Received..:** 08/11/09
Prep Date.....: 08/12/09 **Analysis Date..:** 08/23/09
Prep Batch #...: 9224294 **Analysis Time..:** 13:09
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	71	(36 - 127)
Naphthalene-d8	54	(37 - 107)

QC DATA ASSOCIATION SUMMARY

D9H110178

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C		9224294	9224197
002	WG	SW846 8270C		9224294	9224197
003	WG	SW846 8270C		9224294	9224197
004	WG	SW846 8270C		9224294	9224197
005	WG	SW846 8270C		9224294	9224197
006	WG	SW846 8270C		9224294	9224197
007	WG	SW846 8270C		9224294	9224197
008	WG	SW846 8270C		9224294	9224197
009	WG	SW846 8270C		9224294	9224197
010	WG	SW846 8270C		9224294	9224197
011	WG	SW846 8270C		9224294	9224197
012	WG	SW846 8270C		9224294	9224197
013	WG	SW846 8270C		9224294	9224197

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 **Work Order #...:** LH2GP1AA **Matrix.....:** WATER
MB Lot-Sample #: D9H120000-294

Prep Date.....: 08/12/09 **Analysis Time..:** 08:54
Analysis Date..: 08/22/09 **Prep Batch #...:** 9224294
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	93	(30 - 160)
Fluorene d-10	51	(36 - 127)
Naphthalene-d8	30 *	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 Work Order #...: LH2GP1AC Matrix.....: WATER
LCS Lot-Sample#: D9H120000-294
Prep Date.....: 08/12/09 Analysis Date..: 08/22/09
Prep Batch #...: 9224294 Analysis Time..: 09:53
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	53	(30 - 150)	SW846 8270C
Acenaphthylene	54	(30 - 150)	SW846 8270C
Acridine	88	(30 - 150)	SW846 8270C
Anthracene	83	(30 - 150)	SW846 8270C
Benzo(a)anthracene	92	(30 - 150)	SW846 8270C
Benzo(b)fluoranthene	86	(30 - 150)	SW846 8270C
Benzo(k)fluoranthene	91	(30 - 150)	SW846 8270C
7H-Dibenzo[c,g]carbazole	92	(30 - 150)	SW846 8270C
Dibenz(a,h)acridine	91	(30 - 150)	SW846 8270C
Dibenz(a,j)acridine	91	(30 - 150)	SW846 8270C
2,3-Benzofuran	62	(30 - 150)	SW846 8270C
Benzo(ghi)perylene	96	(30 - 150)	SW846 8270C
Dibenzo(a,e)pyrene	90	(30 - 150)	SW846 8270C
Dibenzo(a,i)pyrene	85	(30 - 150)	SW846 8270C
Dibenzo(a,h)pyrene	46	(30 - 150)	SW846 8270C
Dibenzo(a,l)pyrene	77	(30 - 150)	SW846 8270C
Benzo(a)pyrene	89	(30 - 150)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	30	(30 - 150)	SW846 8270C
2,6-Dimethylnaphthalene	50	(30 - 150)	SW846 8270C
Benzo(e)pyrene	93	(30 - 150)	SW846 8270C
Benzo(b)thiophene	58	(30 - 150)	SW846 8270C
3-Methylcholanthrene	64	(30 - 150)	SW846 8270C
6-Methylchrysene	95	(30 - 150)	SW846 8270C
1-Methylphenanthrene	90	(30 - 150)	SW846 8270C
Biphenyl	51	(30 - 150)	SW846 8270C
Carbazole	93	(30 - 150)	SW846 8270C
2,3,5-Trimethylnaphthalen	51	(30 - 150)	SW846 8270C
Chrysene	93	(43 - 124)	SW846 8270C
Dibenzo(a,h)anthracene	91	(30 - 150)	SW846 8270C
Dibenzofuran	55	(30 - 150)	SW846 8270C
Dibenzothiophene	73	(30 - 150)	SW846 8270C
2,3-Dihydroindene	52	(30 - 150)	SW846 8270C
Fluoranthene	92	(30 - 150)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 **Work Order #...:** LH2GP1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H120000-294

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**58**	**(51 - 120)**	**SW846 8270C**
Indene	**56**	**(49 - 108)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**94**	**(30 - 150)**	**SW846 8270C**
Indole	**69**	**(30 - 150)**	**SW846 8270C**
2-Methylnaphthalene	**52**	**(47 - 138)**	**SW846 8270C**
1-Methylnaphthalene	**52**	**(30 - 150)**	**SW846 8270C**
Naphthalene	**54**	**(43 - 128)**	**SW846 8270C**
Perylene	**90**	**(30 - 150)**	**SW846 8270C**
Phenanthrene	**80**	**(30 - 150)**	**SW846 8270C**
Pyrene	**92**	**(30 - 150)**	**SW846 8270C**
Quinoline	**85**	**(40 - 126)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	98	(30 - 160)
Fluorene d-10	81	(36 - 127)
Naphthalene-d8	74	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 Work Order #...: LH2GP1AC Matrix.....: WATER
LCS Lot-Sample#: D9H120000-294
Prep Date.....: 08/12/09 Analysis Date..: 08/22/09
Prep Batch #...: 9224294 Analysis Time..: 09:53
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	50.0	26.4	ug/L	53	SW846 8270C
Acenaphthylene	50.0	27.2	ug/L	54	SW846 8270C
Acridine	50.0	44.1	ug/L	88	SW846 8270C
Anthracene	50.0	41.4	ug/L	83	SW846 8270C
Benzo(a)anthracene	50.0	46.0	ug/L	92	SW846 8270C
Benzo(b)fluoranthene	50.0	43.2	ug/L	86	SW846 8270C
Benzo(k)fluoranthene	50.0	45.5	ug/L	91	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	45.9	ug/L	92	SW846 8270C
Dibenz(a,h)acridine	50.0	45.6	ug/L	91	SW846 8270C
Dibenz(a,j)acridine	50.0	45.5	ug/L	91	SW846 8270C
2,3-Benzofuran	50.0	30.8	ug/L	62	SW846 8270C
Benzo(ghi)perylene	50.0	47.9	ug/L	96	SW846 8270C
Dibenzo(a,e)pyrene	50.0	44.8	ug/L	90	SW846 8270C
Dibenzo(a,i)pyrene	50.0	42.6	ug/L	85	SW846 8270C
Dibenzo(a,h)pyrene	50.0	22.8	ug/L	46	SW846 8270C
Dibenzo(a,l)pyrene	50.0	38.3	ug/L	77	SW846 8270C
Benzo(a)pyrene	50.0	44.6	ug/L	89	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	15.1	ug/L	30	SW846 8270C
2,6-Dimethylnaphthalene	50.0	24.8	ug/L	50	SW846 8270C
Benzo(e)pyrene	50.0	46.7	ug/L	93	SW846 8270C
Benzo(b)thiophene	50.0	28.9	ug/L	58	SW846 8270C
3-Methylcholanthrene	50.0	32.1	ug/L	64	SW846 8270C
6-Methylchrysene	50.0	47.4	ug/L	95	SW846 8270C
1-Methylphenanthrene	50.0	45.2	ug/L	90	SW846 8270C
Biphenyl	50.0	25.5	ug/L	51	SW846 8270C
Carbazole	50.0	46.3	ug/L	93	SW846 8270C
2,3,5-Trimethylnaphthalen	50.0	25.6	ug/L	51	SW846 8270C
Chrysene	50.0	46.6	ug/L	93	SW846 8270C
Dibenzo(a,h)anthracene	50.0	45.4	ug/L	91	SW846 8270C
Dibenzofuran	50.0	27.6	ug/L	55	SW846 8270C
Dibenzothiophene	50.0	36.7	ug/L	73	SW846 8270C
2,3-Dihydroindene	50.0	26.2	ug/L	52	SW846 8270C
Fluoranthene	50.0	46.0	ug/L	92	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 **Work Order #...:** LH2GP1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H120000-294

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**50.0**	**29.2**	**ug/L**	**58**	**SW846 8270C**
Indene	**50.0**	**28.1**	**ug/L**	**56**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**50.0**	**46.8**	**ug/L**	**94**	**SW846 8270C**
Indole	**50.0**	**34.4**	**ug/L**	**69**	**SW846 8270C**
2-Methylnaphthalene	**50.0**	**26.0**	**ug/L**	**52**	**SW846 8270C**
1-Methylnaphthalene	**50.0**	**26.1**	**ug/L**	**52**	**SW846 8270C**
Naphthalene	**50.0**	**27.2**	**ug/L**	**54**	**SW846 8270C**
Perylene	**50.0**	**45.0**	**ug/L**	**90**	**SW846 8270C**
Phenanthrene	**50.0**	**40.0**	**ug/L**	**80**	**SW846 8270C**
Pyrene	**50.0**	**45.8**	**ug/L**	**92**	**SW846 8270C**
Quinoline	**50.0**	**42.3**	**ug/L**	**85**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	98	(30 - 160)
Fluorene d-10	81	(36 - 127)
Naphthalene-d8	74	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 Work Order #...: LHX521AC-MS Matrix.....: WG
MS Lot-Sample #: D9H110178-001 LHX521AD-MSD
Date Sampled...: 08/10/09 Date Received..: 08/11/09
Prep Date.....: 08/12/09 Analysis Date..: 08/22/09
Prep Batch #...: 9224294 Analysis Time..: 11:50
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	83	(30 - 150)			SW846 8270C
	81	(30 - 150)	3.2	(0-30)	SW846 8270C
Acenaphthylene	79	(30 - 150)			SW846 8270C
	78	(30 - 150)	1.4	(0-30)	SW846 8270C
Acridine	95	(30 - 150)			SW846 8270C
	95	(30 - 150)	0.62	(0-30)	SW846 8270C
Anthracene	95	(30 - 150)			SW846 8270C
	95	(30 - 150)	0.51	(0-30)	SW846 8270C
Benzo(a)anthracene	90	(30 - 150)			SW846 8270C
	90	(30 - 150)	0.93	(0-30)	SW846 8270C
Benzo(b)fluoranthene	85	(30 - 150)			SW846 8270C
	85	(30 - 150)	0.09	(0-30)	SW846 8270C
Benzo(k)fluoranthene	91	(30 - 150)			SW846 8270C
	88	(30 - 150)	3.6	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	95	(30 - 150)			SW846 8270C
	94	(30 - 150)	1.4	(0-30)	SW846 8270C
Dibenz(a,h)acridine	95	(30 - 150)			SW846 8270C
	91	(30 - 150)	5.2	(0-30)	SW846 8270C
Dibenz(a,j)acridine	95	(30 - 150)			SW846 8270C
	92	(30 - 150)	4.0	(0-30)	SW846 8270C
2,3-Benzofuran	49	(30 - 150)			SW846 8270C
	54	(30 - 150)	10	(0-30)	SW846 8270C
Benzo(ghi)perylene	98	(30 - 150)			SW846 8270C
	97	(30 - 150)	0.95	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	95	(30 - 150)			SW846 8270C
	93	(30 - 150)	1.6	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	97	(30 - 150)			SW846 8270C
	99	(30 - 150)	1.9	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	85	(30 - 150)			SW846 8270C
	88	(30 - 150)	3.3	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	92	(30 - 150)			SW846 8270C
	92	(30 - 150)	0.77	(0-30)	SW846 8270C
Benzo(a)pyrene	93	(30 - 150)			SW846 8270C
	91	(30 - 150)	3.3	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	28 a	(30 - 150)			SW846 8270C
	39 p	(30 - 150)	31	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	74	(30 - 150)			SW846 8270C
	75	(30 - 150)	0.08	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 Work Order #...: LHX521AC-MS Matrix.....: WG
MS Lot-Sample #: D9H110178-001 LHX521AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	92	(30 - 150)			SW846 8270C
	90	(30 - 150)	3.1	(0-30)	SW846 8270C
Benzo(b)thiophene	60	(30 - 150)			SW846 8270C
	62	(30 - 150)	2.4	(0-30)	SW846 8270C
3-Methylcholanthrene	84	(30 - 150)			SW846 8270C
	85	(30 - 150)	0.14	(0-30)	SW846 8270C
6-Methylchrysene	93	(30 - 150)			SW846 8270C
	93	(30 - 150)	0.85	(0-30)	SW846 8270C
1-Methylphenanthrene	98	(30 - 150)			SW846 8270C
	95	(30 - 150)	3.4	(0-30)	SW846 8270C
Biphenyl	74	(30 - 150)			SW846 8270C
	74	(30 - 150)	0.82	(0-30)	SW846 8270C
Carbazole	97	(30 - 150)			SW846 8270C
	96	(30 - 150)	1.4	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	85	(30 - 150)			SW846 8270C
	84	(30 - 150)	0.97	(0-30)	SW846 8270C
Chrysene	88	(43 - 124)			SW846 8270C
	88	(43 - 124)	0.14	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	91	(30 - 150)			SW846 8270C
	89	(30 - 150)	1.9	(0-30)	SW846 8270C
Dibenzofuran	87	(30 - 150)			SW846 8270C
	86	(30 - 150)	1.8	(0-30)	SW846 8270C
Dibenzothiophene	91	(30 - 150)			SW846 8270C
	90	(30 - 150)	1.0	(0-30)	SW846 8270C
2,3-Dihydroindene	46	(30 - 150)			SW846 8270C
	55	(30 - 150)	18	(0-30)	SW846 8270C
Fluoranthene	96	(30 - 150)			SW846 8270C
	93	(30 - 150)	4.4	(0-30)	SW846 8270C
Fluorene	86	(51 - 120)			SW846 8270C
	87	(51 - 120)	0.87	(0-30)	SW846 8270C
Indene	48 a	(49 - 108)			SW846 8270C
	54	(49 - 108)	12	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	95	(30 - 150)			SW846 8270C
	93	(30 - 150)	2.2	(0-30)	SW846 8270C
Indole	52	(30 - 150)			SW846 8270C
	47	(30 - 150)	12	(0-30)	SW846 8270C
2-Methylnaphthalene	66	(47 - 138)			SW846 8270C
	70	(47 - 138)	4.1	(0-30)	SW846 8270C
1-Methylnaphthalene	68	(30 - 150)			SW846 8270C
	71	(30 - 150)	3.2	(0-30)	SW846 8270C
Naphthalene	57	(43 - 128)			SW846 8270C
	61	(43 - 128)	6.9	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 **Work Order #...:** LHX521AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H110178-001 LHX521AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**91**	**(30 - 150)**			**SW846 8270C**
	89	**(30 - 150)**	**2.4**	**(0-30)**	**SW846 8270C**
Phenanthrene	**94**	**(30 - 150)**			**SW846 8270C**
	94	**(30 - 150)**	**0.06**	**(0-30)**	**SW846 8270C**
Pyrene	**96**	**(30 - 150)**			**SW846 8270C**
	92	**(30 - 150)**	**4.6**	**(0-30)**	**SW846 8270C**
Quinoline	**89**	**(40 - 126)**			**SW846 8270C**
	87	**(40 - 126)**	**2.7**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(30 - 160)
	83	(30 - 160)
Fluorene d-10	87	(36 - 127)
	85	(36 - 127)
Naphthalene-d8	65	(37 - 107)
	58	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 Work Order #...: LHX521AC-MS Matrix.....: WG
MS Lot-Sample #: D9H110178-001 LHX521AD-MSD
Date Sampled...: 08/10/09 Date Received..: 08/11/09
Prep Date.....: 08/12/09 Analysis Date..: 08/22/09
Prep Batch #...: 9224294 Analysis Time..: 11:50
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	47.5	39.4	ug/L	83		SW846 8270C
	ND	47.3	38.2	ug/L	81	3.2	SW846 8270C
Acenaphthylene	ND	47.5	37.5	ug/L	79		SW846 8270C
	ND	47.3	36.9	ug/L	78	1.4	SW846 8270C
Acridine	ND	47.5	45.0	ug/L	95		SW846 8270C
	ND	47.3	44.8	ug/L	95	0.62	SW846 8270C
Anthracene	ND	47.5	45.2	ug/L	95		SW846 8270C
	ND	47.3	45.0	ug/L	95	0.51	SW846 8270C
Benzo(a)anthracene	ND	47.5	43.0	ug/L	90		SW846 8270C
	ND	47.3	42.6	ug/L	90	0.93	SW846 8270C
Benzo(b)fluoranthene	ND	47.5	40.3	ug/L	85		SW846 8270C
	ND	47.3	40.3	ug/L	85	0.09	SW846 8270C
Benzo(k)fluoranthene	ND	47.5	43.0	ug/L	91		SW846 8270C
	ND	47.3	41.5	ug/L	88	3.6	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.5	45.0	ug/L	95		SW846 8270C
	ND	47.3	44.4	ug/L	94	1.4	SW846 8270C
Dibenz(a,h)acridine	ND	47.5	45.4	ug/L	95		SW846 8270C
	ND	47.3	43.1	ug/L	91	5.2	SW846 8270C
Dibenz(a,j)acridine	ND	47.5	45.2	ug/L	95		SW846 8270C
	ND	47.3	43.4	ug/L	92	4.0	SW846 8270C
2,3-Benzofuran	ND	47.5	23.3	ug/L	49		SW846 8270C
	ND	47.3	25.8	ug/L	54	10	SW846 8270C
Benzo(ghi)perylene	ND	47.5	46.4	ug/L	98		SW846 8270C
	ND	47.3	46.0	ug/L	97	0.95	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.5	45.0	ug/L	95		SW846 8270C
	ND	47.3	44.2	ug/L	93	1.6	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.5	46.0	ug/L	97		SW846 8270C
	ND	47.3	46.9	ug/L	99	1.9	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.5	40.4	ug/L	85		SW846 8270C
	ND	47.3	41.7	ug/L	88	3.3	SW846 8270C
Dibenzo(a,l)pyrene	ND	47.5	43.8	ug/L	92		SW846 8270C
	ND	47.3	43.5	ug/L	92	0.77	SW846 8270C
Benzo(a)pyrene	ND	47.5	44.4	ug/L	93		SW846 8270C
	ND	47.3	42.9	ug/L	91	3.3	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.5	13.5	ug/L	28 a		SW846 8270C
	ND	47.3	18.5	ug/L	39 p	31	SW846 8270C
2,6-Dimethylnaphthalene	ND	47.5	35.2	ug/L	74		SW846 8270C
	ND	47.3	35.3	ug/L	75	0.08	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 Work Order #...: LHX521AC-MS Matrix.....: WG
MS Lot-Sample #: D9H110178-001 LHX521AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.5	43.9	ug/L	92		SW846 8270C
	ND	47.3	42.6	ug/L	90	3.1	SW846 8270C
Benzo(b)thiophene	ND	47.5	28.7	ug/L	60		SW846 8270C
	ND	47.3	29.4	ug/L	62	2.4	SW846 8270C
3-Methylcholanthrene	ND	47.5	40.1	ug/L	84		SW846 8270C
	ND	47.3	40.2	ug/L	85	0.14	SW846 8270C
6-Methylchrysene	ND	47.5	44.4	ug/L	93		SW846 8270C
	ND	47.3	44.0	ug/L	93	0.85	SW846 8270C
1-Methylphenanthrene	ND	47.5	46.4	ug/L	98		SW846 8270C
	ND	47.3	44.9	ug/L	95	3.4	SW846 8270C
Biphenyl	ND	47.5	35.4	ug/L	74		SW846 8270C
	ND	47.3	35.1	ug/L	74	0.82	SW846 8270C
Carbazole	ND	47.5	46.2	ug/L	97		SW846 8270C
	ND	47.3	45.6	ug/L	96	1.4	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	47.5	40.3	ug/L	85		SW846 8270C
	ND	47.3	39.9	ug/L	84	0.97	SW846 8270C
Chrysene	ND	47.5	41.8	ug/L	88		SW846 8270C
	ND	47.3	41.8	ug/L	88	0.14	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.5	43.1	ug/L	91		SW846 8270C
	ND	47.3	42.2	ug/L	89	1.9	SW846 8270C
Dibenzofuran	ND	47.5	41.4	ug/L	87		SW846 8270C
	ND	47.3	40.7	ug/L	86	1.8	SW846 8270C
Dibenzothiophene	ND	47.5	43.0	ug/L	91		SW846 8270C
	ND	47.3	42.6	ug/L	90	1.0	SW846 8270C
2,3-Dihydroindene	ND	47.5	21.7	ug/L	46		SW846 8270C
	ND	47.3	25.9	ug/L	55	18	SW846 8270C
Fluoranthene	ND	47.5	45.8	ug/L	96		SW846 8270C
	ND	47.3	43.8	ug/L	93	4.4	SW846 8270C
Fluorene	ND	47.5	40.9	ug/L	86		SW846 8270C
	ND	47.3	41.2	ug/L	87	0.87	SW846 8270C
Indene	ND	47.5	22.7	ug/L	48 a		SW846 8270C
	ND	47.3	25.7	ug/L	54	12	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.5	45.0	ug/L	95		SW846 8270C
	ND	47.3	44.0	ug/L	93	2.2	SW846 8270C
Indole	ND	47.5	24.9	ug/L	52		SW846 8270C
	ND	47.3	22.0	ug/L	47	12	SW846 8270C
2-Methylnaphthalene	ND	47.5	31.6	ug/L	66		SW846 8270C
	ND	47.3	32.9	ug/L	70	4.1	SW846 8270C
1-Methylnaphthalene	ND	47.5	32.4	ug/L	68		SW846 8270C
	ND	47.3	33.4	ug/L	71	3.2	SW846 8270C
Naphthalene	ND	47.5	27.0	ug/L	57		SW846 8270C
	ND	47.3	28.9	ug/L	61	6.9	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H110178 **Work Order #...:** LHX521AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H110178-001 LHX521AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**47.5**	**43.3**	**ug/L**	**91**		**SW846 8270C**
	ND	**47.3**	**42.2**	**ug/L**	**89**	**2.4**	**SW846 8270C**
Phenanthrene	**ND**	**47.5**	**44.6**	**ug/L**	**94**		**SW846 8270C**
	ND	**47.3**	**44.6**	**ug/L**	**94**	**0.06**	**SW846 8270C**
Pyrene	**ND**	**47.5**	**45.8**	**ug/L**	**96**		**SW846 8270C**
	ND	**47.3**	**43.7**	**ug/L**	**92**	**4.6**	**SW846 8270C**
Quinoline	**ND**	**47.5**	**42.1**	**ug/L**	**89**		**SW846 8270C**
	ND	**47.3**	**41.0**	**ug/L**	**87**	**2.7**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(30 - 160)
	83	(30 - 160)
Fluorene d-10	87	(36 - 127)
	85	(36 - 127)
Naphthalene-d8	65	(37 - 107)
	58	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

Sampler ID: _____

Temperature on Receipt: 4.1, 3.4, 4.8 °C 8/11/09 IR1

Drinking Water? Yes ☐ No ☐

TestAmerica
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TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/10/09	115115
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPB	Special Instructions/ Conditions of Receipt
W117-081009	8/10/09	1130		X			2						X	
W117D-081009		1135												
W117FB-081009		1120												
W117FBD-081009		1125												
W117MS-081009		1140												
W117MSD-081009		1145												
P307-081009		1055												
P309-081009		1310												
W420-081009		1250												
P112-081009		1005												
P109-081009		1030												
W427-081009		1550												

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/10/09	1630	1. Received By	8/11/9	0845
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/10/07	115116
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 2 of 2
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa D.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PCB	Special Instructions/ Conditions of Receipt
P310-081009	8/10/09	1435		X			X						X	
W439-081009	↓	1355		↓			↓						1	
P308-081009	↓	1345		↓			↓						1	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/10/07	1630	1. Received By	8/11/9	0845
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

AECOM Environment
FNBB 332 Minnesota Street Suite E1000 St. Paul, MN 55101
T 651.222.0841 F 651.222.8914 www.aecom.com

Memorandum

Date: March 8, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPB PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9H110178
Appendix I

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of 11 aqueous samples and two field blanks for part per billion (ppb) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C. The samples were collected on August 10, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9H110178.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W117-081009	W117D-081009
W117FB-081009	W117FBD-081009
P307-081009	P309-081009
W420-081009	P112-081009
P109-081009	W427-081009
P310-081009	P308-081009

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Sample IDs	Sample IDs
W439-081009	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. A sample collection time discrepancy was noted between the COC and sample bottle. The client was notified on August 11, 2009. No action was taken.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blank 9224294 or the field blanks (W117FB-081009 and W117FBD-081009).

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on samples W117-081009. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

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Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
7,12-Dimethylbenz(a)anthracene (MS)	28		30-150	0-25	J	UJ
7,12-Dimethylbenz(a)anthracene (MSD)		31	30-150	0-25	J	UJ
Associated sample: SLP6-031209						

The RPD in the laboratory data package were not consistent with RPD outlined in QAPP. The correct limits are 0-25 and not 0-30.

LCS Results

The original LCS for this data set exhibited recoveries below the lower control limits for a number of compounds. The lab reanalyzed the LCS with a different curve after the report had been submitted. The reanalysis had all compounds within the control limits.

Field Duplicate Results

Samples W117-081009 and W117-081009 were the field duplicate pairs analyzed with this data set.

A total of 0 of 31 compounds were detected.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W420-081009 and W439-081009 were initially analyzed undiluted. The results of some compounds fell outside the calibration range. The samples were then diluted at 4x, 10x, and 20x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within $\pm$ 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this $\pm$ 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9H120307

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

August 27, 2009

CASE NARRATIVE
D9H120307

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Twelve samples plus one set of MS/MSD samples were received under chain of custody on August 12, 2009. The samples were received at temperatures of 3.4°C, 3.6°C, 3.7°C, 2.8°C, 2.5°C, 2.9°C and 1.6°C. All sample containers were received in acceptable condition.

The Chain of Custody indicates that sample SLP10TFB-081109 should only be extracted for PAH-ppt. On August 12, 2009, Drew Tarara instructed the laboratory to proceed with the PAH-ppt analysis of sample SLP10TFB-081109. Those results can be found in this report.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Surrogate Chrysene-d12 was recovered below the lower control limit in sample W33R-081109 at 12% (limits 28-101%). Upon re-aliquoting and reanalyzing, the surrogate recovery outlier was still present, demonstrating that this anomaly is due to matrix interference. Therefore, corrective action is deemed unnecessary.

Sample W410-081109 was analyzed at three different dilutions to obtain all target analytes within the calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for those analyses performed at a 4x or greater dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

The MS/MSD associated with QC batch 9226215 was performed using sample W24-081109, as requested. MS/MSD exhibited 17 of the 44 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 19 of the 44 Matrix Spike Duplicate compound recoveries and one of the three surrogate recoveries outside the control limits. The MS/MSD exhibited 13 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene
7H-Dibenzo[c,g]carbazole	Dibenz(a,h)acridine	Dibenz(a,j)acridine
Benzo(ghi)perylene	Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene
Dibenzo(a,h)pyrene	Dibenzo(a,l),pyrene	Benzo(a)pyrene
Benzo(e)pyrene	6-Methylchrysene	Chrysene
Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	3-Methylcholanthrene
Perylene	Chrysene-d12	

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9H120307
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	33	33
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB/FBD	95	95
MS	7	6
MS Surrogates	3	3
MSD	7	5
MSD Surrogates	3	2
MS/MSD RPD	7	5
Sample/Dup. RPD	31	31
Sample Surrogates	36	35
Samples and QC Internal Standard Area	48	48
TOTAL	**283**	**276**
% Completeness	**97.5%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9H120307					
Sample: W24-081109		**DUP: W24D-081109**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	3.7	Acenaphthene	3.3	11.4	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	7.9	Acridine	7.7	2.6	
Anthracene	3.9	Anthracene	4.1	5.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	1.0	NC	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	0.96	NC	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	1.4	Carbazole	1.4	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	9.9	2,3-Dihydroindene	10	1.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	4.7	Indene	5.4	13.9	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	2.8	2-Methylnaphthalene	2.8	0.0	
1-Methylnaphthalene	1.7	1-Methylnaphthalene	1.8	5.7	
Naphthalene	6.4	Naphthalene	7.0	9.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	4.6	Pyrene	4.0	14.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9H120307

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W24-081109 08/11/09 13:35 001				
Acenaphthene	3.7 J	5.7	ng/L	SW846 8270C SIM
Acridine	7.9	6.5	ng/L	SW846 8270C SIM
Anthracene	3.9 J	4.2	ng/L	SW846 8270C SIM
Carbazole	1.4 J	3.8	ng/L	SW846 8270C SIM
2,3-Dihydroindene	9.9	5.0	ng/L	SW846 8270C SIM
Indene	4.7	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.8 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.7 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	6.4 J	8.6	ng/L	SW846 8270C SIM
Pyrene	4.6	4.2	ng/L	SW846 8270C SIM
W24D-081109 08/11/09 13:40 002				
Acenaphthene	3.3 J	5.7	ng/L	SW846 8270C SIM
Acridine	7.7	6.5	ng/L	SW846 8270C SIM
Anthracene	4.1 J	4.2	ng/L	SW846 8270C SIM
2,3-Benzofuran	1.0 J	5.4	ng/L	SW846 8270C SIM
Benzo(b)thiophene	0.96 J	5.2	ng/L	SW846 8270C SIM
Carbazole	1.4 J	3.8	ng/L	SW846 8270C SIM
2,3-Dihydroindene	10	5.0	ng/L	SW846 8270C SIM
Indene	5.4	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.8 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.8 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	7.0 J	8.6	ng/L	SW846 8270C SIM
Pyrene	4.0 J	4.2	ng/L	SW846 8270C SIM
W24FB-081109 08/11/09 13:10 003				
Benzo(b)thiophene	3.7 J	5.2	ng/L	SW846 8270C SIM
2-Methylnaphthalene	1.3 J	5.9	ng/L	SW846 8270C SIM
Naphthalene	2.9 J	8.6	ng/L	SW846 8270C SIM
W24FBD-081109 08/11/09 13:20 004				
Indene	3.3 J	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	1.9 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.4 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	4.7 J	8.6	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9H120307

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP4T-081109 08/11/09 08:18 005				
Naphthalene	1.9 J	8.6	ng/L	SW846 8270C SIM
Pyrene	1.3 J	4.2	ng/L	SW846 8270C SIM
SLP6-081109 08/11/09 09:00 007				
Acenaphthene	100	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	12	4.8	ng/L	SW846 8270C SIM
Anthracene	1.9 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	11	5.2	ng/L	SW846 8270C SIM
Carbazole	2.2 J	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	1.8 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	68	5.0	ng/L	SW846 8270C SIM
Fluoranthene	5.8	4.6	ng/L	SW846 8270C SIM
Indene	6.2	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	1.5 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	2.2 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	4.0 J	8.6	ng/L	SW846 8270C SIM
Pyrene	4.7	4.2	ng/L	SW846 8270C SIM
W48-081109 08/11/09 12:00 008				
Acenaphthene	130	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	5.5	4.8	ng/L	SW846 8270C SIM
Acridine	10	6.5	ng/L	SW846 8270C SIM
Anthracene	5.1	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	17	5.2	ng/L	SW846 8270C SIM
Carbazole	1.7 J	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	1.5 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	6.7	5.0	ng/L	SW846 8270C SIM
Indene	66	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.9 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	8.6	5.6	ng/L	SW846 8270C SIM
Naphthalene	7.8 J	8.6	ng/L	SW846 8270C SIM
Phenanthrene	3.5 J	6.3	ng/L	SW846 8270C SIM
Pyrene	4.8	4.2	ng/L	SW846 8270C SIM
W33R-081109 08/11/09 10:35 009				
Acenaphthene	13	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	0.88 J	4.8	ng/L	SW846 8270C SIM
Anthracene	2.2 J	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	1.5 J	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	3.8 J,K	4.7	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9H120307

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W33R-081109 08/11/09 10:35 009				
Benzo(ghi)perylene	1.2 J	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	1.7 J	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	1.5 J	4.3	ng/L	SW846 8270C SIM
Biphenyl	4.8 J	5.6	ng/L	SW846 8270C SIM
Carbazole	2.5 J	3.8	ng/L	SW846 8270C SIM
Chrysene	2.3 J	5.6	ng/L	SW846 8270C SIM
Dibenzofuran	3.3 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.6 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	1.9 J	5.0	ng/L	SW846 8270C SIM
Fluoranthene	15	4.6	ng/L	SW846 8270C SIM
Fluorene	8.5	4.1	ng/L	SW846 8270C SIM
2-Methylnaphthalene	4.3 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	4.1 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	16	8.6	ng/L	SW846 8270C SIM
Phenanthrene	12	6.3	ng/L	SW846 8270C SIM
Pyrene	17	4.2	ng/L	SW846 8270C SIM
W410-081109 08/11/09 12:30 010				
Acenaphthene	12000	280	ng/L	SW846 8270C SIM
Acenaphthylene	380	4.8	ng/L	SW846 8270C SIM
Acridine	69	6.5	ng/L	SW846 8270C SIM
Anthracene	99	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	9800	260	ng/L	SW846 8270C SIM
Biphenyl	3100	280	ng/L	SW846 8270C SIM
Dibenzofuran	300	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	150	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	7600	500	ng/L	SW846 8270C SIM
Fluoranthene	100	4.6	ng/L	SW846 8270C SIM
Fluoranthene	250	230	ng/L	SW846 8270C SIM
Fluorene	4300	200	ng/L	SW846 8270C SIM
Indene	7000	470	ng/L	SW846 8270C SIM
2-Methylnaphthalene	15	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	6300	560	ng/L	SW846 8270C SIM
Naphthalene	6400	430	ng/L	SW846 8270C SIM
Phenanthrene	4000	320	ng/L	SW846 8270C SIM
Pyrene	49	4.2	ng/L	SW846 8270C SIM
SLP10T-081109 08/11/09 09:25 011				
Acenaphthene	61	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	4.6 J	4.8	ng/L	SW846 8270C SIM
Benzo(b)thiophene	5.8	5.2	ng/L	SW846 8270C SIM

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EXECUTIVE SUMMARY - Detection Highlights

D9H120307

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP10T-081109 08/11/09 09:25 011				
Biphenyl	1.1 J	5.6	ng/L	SW846 8270C SIM
Carbazole	1.5 J	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	1.5 J	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	1.2 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	34	5.0	ng/L	SW846 8270C SIM
Fluoranthene	3.2 J	4.6	ng/L	SW846 8270C SIM
Fluorene	8.4	4.1	ng/L	SW846 8270C SIM
Indene	8.0	4.7	ng/L	SW846 8270C SIM
1-Methylnaphthalene	14	5.6	ng/L	SW846 8270C SIM
Naphthalene	2.6 J	8.6	ng/L	SW846 8270C SIM
Pyrene	4.1 J	4.2	ng/L	SW846 8270C SIM
SLP10TFB-081109 08/11/09 09:30 012				
2-Methylnaphthalene	1.1 J	5.9	ng/L	SW846 8270C SIM
Naphthalene	2.5 J	8.6	ng/L	SW846 8270C SIM
Pyrene	1.6 J	4.2	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9H120307

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9H120307

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C SIM	Ashley Wolfe	004211

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9H120307

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LH3AF	001	W24-081109	08/11/09	13:35
LH3A4	002	W24D-081109	08/11/09	13:40
LH3A6	003	W24FB-081109	08/11/09	13:10
LH3A7	004	W24FBD-081109	08/11/09	13:20
LH3A9	005	SLP4T-081109	08/11/09	08:18
LH3CE	006	SLP3-081109	08/11/09	09:40
LH3CG	007	SLP6-081109	08/11/09	09:00
LH3CH	008	W48-081109	08/11/09	12:00
LH3CJ	009	W33R-081109	08/11/09	10:35
LH3CK	010	W410-081109	08/11/09	12:30
LH3CL	011	SLP10T-081109	08/11/09	09:25
LH3CP	012	SLP10TFB-081109	08/11/09	09:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W24-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-001	**Work Order #...:** LH3AF1AA	**Matrix.....:** WG	
Date Sampled...: 08/11/09	**Date Received..:** 08/12/09		
Prep Date.....: 08/14/09	**Analysis Date..:** 08/21/09		
Prep Batch #...: 9226215	**Analysis Time..:** 10:39		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**3.7 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	**7.9**	**6.5**	**ng/L**
Anthracene	**3.9 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	**1.4 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**9.9**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**4.7**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**2.8 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**1.7 J**	**5.6**	**ng/L**
Naphthalene	**6.4 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**4.6**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	30	(28 - 101)
Fluorene d-10	62	(23 - 84)
Naphthalene-d8	72	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W24D-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-002 Work Order #...: LH3A41AA Matrix.....: WG
Date Sampled...: 08/11/09 Date Received..: 08/12/09
Prep Date.....: 08/14/09 Analysis Date..: 08/21/09
Prep Batch #...: 9226215 Analysis Time..: 12:23
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**3.3 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	**7.7**	**6.5**	**ng/L**
Anthracene	**4.1 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	**1.0 J**	**5.4**	**ng/L**
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**0.96 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.4 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**10**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**5.4**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**2.8 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**1.8 J**	**5.6**	**ng/L**
Naphthalene	**7.0 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**4.0 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	35	(28 - 101)
Fluorene d-10	63	(23 - 84)
Naphthalene-d8	79	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W24FB-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-003	**Work Order #...:** LH3A61AA	**Matrix.....:** WG	
Date Sampled...: 08/11/09	**Date Received..:** 08/12/09		
Prep Date.....: 08/14/09	**Analysis Date..:** 08/20/09		
Prep Batch #...: 9226215	**Analysis Time..:** 14:49		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**3.7 J**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**1.3 J**	**5.9**	**ng/L**
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**2.9 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	51	(28 - 101)
Fluorene d-10	45	(23 - 84)
Naphthalene-d8	52	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W24FBD-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-004 **Work Order #...:** LH3A71AA **Matrix.....:** WG
Date Sampled...: 08/11/09 **Date Received..:** 08/12/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/20/09
Prep Batch #...: 9226215 **Analysis Time..:** 15:23
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**3.3 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**1.9 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**1.4 J**	**5.6**	**ng/L**
Naphthalene	**4.7 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	49	(28 - 101)
Fluorene d-10	42	(23 - 84)
Naphthalene-d8	50	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP4T-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-005 **Work Order #...:** LH3A91AA **Matrix.....:** WG
Date Sampled...: 08/11/09 **Date Received..:** 08/12/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9226215 **Analysis Time..:** 12:58
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
7,12-Dimethylbenz(a)-anthracene	ND	2.8	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
3-Methylcholanthrene	ND	5.0	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.9 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**1.3 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	29	(28 - 101)
Fluorene d-10	58	(23 - 84)
Naphthalene-d8	75	(22 - 97)

(Continued on next page)

City of Saint Louis Park

Client Sample ID: SLP4T-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-005 Work Order #...: LH3A91AA Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP3-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-006 **Work Order #...:** LH3CE1AA **Matrix.....:** WG
Date Sampled...: 08/11/09 **Date Received..:** 08/12/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/20/09
Prep Batch #...: 9226215 **Analysis Time..:** 16:33
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	ND	8.6	ng/L
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	35	(28 - 101)
Fluorene d-10	45	(23 - 84)
Naphthalene-d8	52	(22 - 97)

City of Saint Louis Park

Client Sample ID: SLP6-081109

GC/MS Semivolatiles

Lot-Sample #...:	D9H120307-007	**Work Order #...:**	LH3CG1AA	**Matrix.....:**	WG
Date Sampled...:	08/11/09	**Date Received..:**	08/12/09		
Prep Date.....:	08/14/09	**Analysis Date..:**	08/21/09		
Prep Batch #...:	9226215	**Analysis Time..:**	14:07		
Dilution Factor:	1				
		Method.....:	SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**100**	**5.7**	**ng/L**
Acenaphthylene	**12**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**1.9 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**11**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**2.2 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**1.8 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**68**	**5.0**	**ng/L**
Fluoranthene	**5.8**	**4.6**	**ng/L**
Fluorene	ND	4.1	ng/L
Indene	**6.2**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**1.5 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**2.2 J**	**5.6**	**ng/L**
Naphthalene	**4.0 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**4.7**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	37	(28 - 101)
Fluorene d-10	62	(23 - 84)
Naphthalene-d8	73	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W48-081109

GC/MS Semivolatiles

Lot-Sample #...:	D9H120307-008	**Work Order #...:**	LH3CH1AA	**Matrix.....:**	WG
Date Sampled...:	08/11/09	**Date Received..:**	08/12/09		
Prep Date.....:	08/14/09	**Analysis Date..:**	08/21/09		
Prep Batch #...:	9226215	**Analysis Time..:**	14:42		
Dilution Factor:	1				
		Method.....:	SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**130**	**5.7**	**ng/L**
Acenaphthylene	**5.5**	**4.8**	**ng/L**
Acridine	**10**	**6.5**	**ng/L**
Anthracene	**5.1**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**17**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.7 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**1.5 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**6.7**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**66**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**2.9 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**8.6**	**5.6**	**ng/L**
Naphthalene	**7.8 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**3.5 J**	**6.3**	**ng/L**
Pyrene	**4.8**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	37	(28 - 101)
Fluorene d-10	71	(23 - 84)
Naphthalene-d8	76	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W33R-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-009	**Work Order #...:** LH3CJ1AA	**Matrix.....:** WG	
Date Sampled...: 08/11/09	**Date Received..:** 08/12/09		
Prep Date.....: 08/14/09	**Analysis Date..:** 08/21/09		
Prep Batch #...: 9226215	**Analysis Time..:** 15:17		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**13**	**5.7**	**ng/L**
Acenaphthylene	**0.88 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	**2.2 J**	**4.2**	**ng/L**
Benzo(a)anthracene	**1.5 J**	**4.3**	**ng/L**
Benzo(b)fluoranthene	**3.8 J,K**	**4.7**	**ng/L**
Benzo(k)fluoranthene	ND K	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	**1.2 J**	**6.2**	**ng/L**
Benzo(a)pyrene	**1.7 J**	**2.5**	**ng/L**
Benzo(e)pyrene	**1.5 J**	**4.3**	**ng/L**
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	**4.8 J**	**5.6**	**ng/L**
Carbazole	**2.5 J**	**3.8**	**ng/L**
Chrysene	**2.3 J**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**3.3 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.6 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**1.9 J**	**5.0**	**ng/L**
Fluoranthene	**15**	**4.6**	**ng/L**
Fluorene	**8.5**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**4.3 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**4.1 J**	**5.6**	**ng/L**
Naphthalene	**16**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**12**	**6.3**	**ng/L**
Pyrene	**17**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	12 *	(28 - 101)
Fluorene d-10	46	(23 - 84)
Naphthalene-d8	57	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

K Benzo(b&k)fluoranthene unresolved-matrix.Total reported as Benzo(b)fluoranthene.

City of Saint Louis Park

Client Sample ID: W410-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-010 **Work Order #...:** LH3CK1AA **Matrix.....:** WG
Date Sampled...: 08/11/09 **Date Received..:** 08/12/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/20/09
Prep Batch #...: 9226215 **Analysis Time..:** 18:52
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	**380**	**4.8**	**ng/L**
Acridine	**69**	**6.5**	**ng/L**
Anthracene	**99**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**300**	**5.7**	**ng/L**
Dibenzothiophene	**150**	**4.1**	**ng/L**
Fluoranthene	**100**	**4.6**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**15**	**5.9**	**ng/L**
Perylene	ND	3.8	ng/L
Pyrene	**49**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	32	(28 - 101)
Fluorene d-10	52	(23 - 84)
Naphthalene-d8	51	(22 - 97)

City of Saint Louis Park

Client Sample ID: W410-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-010 Work Order #...: LH3CK2AA Matrix.....: WG
Date Sampled...: 08/11/09 Date Received..: 08/12/09
Prep Date.....: 08/14/09 Analysis Date..: 08/21/09
Prep Batch #...: 9226215 Analysis Time..: 15:52
Dilution Factor: 50

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	12000	280	ng/L
Benzo(b)thiophene	9800	260	ng/L
Biphenyl	3100	280	ng/L
Fluoranthene	250	230	ng/L
Fluorene	4300	200	ng/L
Naphthalene	6400	430	ng/L
Phenanthrene	4000	320	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W410-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-010	**Work Order #...:** LH3CK3AA		**Matrix.....:** WG
Date Sampled...: 08/11/09	**Date Received..:** 08/12/09		
Prep Date.....: 08/14/09	**Analysis Date..:** 08/22/09		
Prep Batch #...: 9226215	**Analysis Time..:** 10:21		
Dilution Factor: 100			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,3-Dihydroindene	**7600**	**500**	**ng/L**
Indene	**7000**	**470**	**ng/L**
1-Methylnaphthalene	**6300**	**560**	**ng/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(28 - 101)
Fluorene d-10	0.0 DIL	(23 - 84)
Naphthalene-d8	0.0 DIL	(22 - 97)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: SLP10T-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-011	**Work Order #...:** LH3CL1AA	**Matrix.....:** WG	
Date Sampled...: 08/11/09	**Date Received..:** 08/12/09		
Prep Date.....: 08/14/09	**Analysis Date..:** 08/21/09		
Prep Batch #...: 9226215	**Analysis Time..:** 16:27		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**61**	**5.7**	**ng/L**
Acenaphthylene	**4.6 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**5.8**	**5.2**	**ng/L**
Biphenyl	**1.1 J**	**5.6**	**ng/L**
Carbazole	**1.5 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**1.5 J**	**5.7**	**ng/L**
Dibenzothiophene	**1.2 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**34**	**5.0**	**ng/L**
7,12-Dimethylbenz(a)-anthracene	ND	2.8	ng/L
Fluoranthene	**3.2 J**	**4.6**	**ng/L**
Fluorene	**8.4**	**4.1**	**ng/L**
Indene	**8.0**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
3-Methylcholanthrene	ND	5.0	ng/L
1-Methylnaphthalene	**14**	**5.6**	**ng/L**
Naphthalene	**2.6 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**4.1 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	44	(28 - 101)
Fluorene d-10	64	(23 - 84)
Naphthalene-d8	81	(22 - 97)

(Continued on next page)

City of Saint Louis Park

Client Sample ID: SLP10T-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-011 Work Order #...: LH3CL1AA Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP10TFB-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-012 **Work Order #...:** LH3CP1AA **Matrix.....:** WG
Date Sampled...: 08/11/09 **Date Received..:** 08/12/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9226215 **Analysis Time..:** 17:02
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
7,12-Dimethylbenz(a)-anthracene	ND	2.8	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**1.1 J**	**5.9**	**ng/L**
3-Methylcholanthrene	ND	5.0	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**2.5 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**1.6 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	70	(28 - 101)
Fluorene d-10	61	(23 - 84)
Naphthalene-d8	76	(22 - 97)

(Continued on next page)

City of Saint Louis Park

Client Sample ID: SLP10TFB-081109

GC/MS Semivolatiles

Lot-Sample #...: D9H120307-012 Work Order #...: LH3CP1AA Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9H120307

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9226215	9226127
002	WG	SW846 8270C SIM		9226215	9226127
003	WG	SW846 8270C SIM		9226215	9226127
004	WG	SW846 8270C SIM		9226215	9226127
005	WG	SW846 8270C SIM		9226215	9226127
006	WG	SW846 8270C SIM		9226215	9226127
007	WG	SW846 8270C SIM		9226215	9226127
008	WG	SW846 8270C SIM		9226215	9226127
009	WG	SW846 8270C SIM		9226215	9226127
010	WG	SW846 8270C SIM		9226215	9226127
011	WG	SW846 8270C SIM		9226215	9226127
012	WG	SW846 8270C SIM		9226215	9226127

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 **Work Order #...:** LH6D91AA **Matrix.....:** WATER
MB Lot-Sample #: D9H140000-215

Prep Date.....: 08/14/09 **Analysis Time..:** 10:47
Analysis Date..: 08/20/09 **Prep Batch #...:** 9226215
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	ND	2.8	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
3-Methylcholanthrene	ND	5.0	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	47	(28 - 101)
Fluorene d-10	42	(23 - 84)
Naphthalene-d8	51	(22 - 97)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 Work Order #...: LH6D91AA Matrix.....: WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 Work Order #...: LH6D91AC Matrix.....: WATER
LCS Lot-Sample#: D9H140000-215
Prep Date.....: 08/14/09 Analysis Date..: 08/20/09
Prep Batch #...: 9226215 Analysis Time..: 11:22
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	54	(30 - 150)	SW846 8270C SIM
Acenaphthylene	50	(30 - 150)	SW846 8270C SIM
Acridine	41	(30 - 150)	SW846 8270C SIM
Anthracene	47	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	47	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	51	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	54	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	48	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	47	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	45	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	52	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	52	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	42	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	32	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	32	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	37	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	52	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	50	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	50	(37 - 105)	SW846 8270C SIM
Benzo(b)thiophene	54	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	47	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	50	(30 - 150)	SW846 8270C SIM
Biphenyl	53	(30 - 150)	SW846 8270C SIM
Carbazole	51	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	49	(30 - 150)	SW846 8270C SIM
Chrysene	54	(20 - 136)	SW846 8270C SIM
Dibenzo(a,h)anthracene	46	(30 - 150)	SW846 8270C SIM
Dibenzofuran	52	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	50	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	48	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	39	(30 - 150)	SW846 8270C SIM
Fluoranthene	51	(30 - 150)	SW846 8270C SIM
Fluorene	50	(34 - 96)	SW846 8270C SIM

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 **Work Order #...:** LH6D91AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H140000-215

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Indene	**50**	**(22 - 86)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**48**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**51**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**50**	**(25 - 95)**	**SW846 8270C SIM**
3-Methylcholanthrene	**41**	**(30 - 150)**	**SW846 8270C SIM**
1-Methylnaphthalene	**54**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**49**	**(27 - 95)**	**SW846 8270C SIM**
Perylene	**53**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**47**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**50**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**53**	**(20 - 112)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	50	(28 - 101)
Fluorene d-10	43	(23 - 84)
Naphthalene-d8	50	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 Work Order #...: LH6D91AC Matrix.....: WATER
LCS Lot-Sample#: D9H140000-215
Prep Date.....: 08/14/09 Analysis Date..: 08/20/09
Prep Batch #...: 9226215 Analysis Time..: 11:22
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	40.1	ng/L	54	SW846 8270C S
Acenaphthylene	75.0	37.8	ng/L	50	SW846 8270C S
Acridine	75.0	30.5	ng/L	41	SW846 8270C S
Anthracene	75.0	35.2	ng/L	47	SW846 8270C S
Benzo(a)anthracene	75.0	35.4	ng/L	47	SW846 8270C S
Benzo(b)fluoranthene	75.0	38.0	ng/L	51	SW846 8270C S
Benzo(k)fluoranthene	75.0	40.3	ng/L	54	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	35.7	ng/L	48	SW846 8270C S
Dibenz(a,h)acridine	75.0	34.9	ng/L	47	SW846 8270C S
Dibenz(a,j)acridine	75.0	33.9	ng/L	45	SW846 8270C S
2,3-Benzofuran	75.0	38.8	ng/L	52	SW846 8270C S
Benzo(ghi)perylene	75.0	38.7	ng/L	52	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	31.4	ng/L	42	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	23.8	ng/L	32	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	23.7	ng/L	32	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	28.1	ng/L	37	SW846 8270C S
Benzo(a)pyrene	75.0	39.0	ng/L	52	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	37.6	ng/L	50	SW846 8270C S
Benzo(e)pyrene	75.0	37.8	ng/L	50	SW846 8270C S
Benzo(b)thiophene	75.0	40.5	ng/L	54	SW846 8270C S
6-Methylchrysene	75.0	35.0	ng/L	47	SW846 8270C S
1-Methylphenanthrene	75.0	37.4	ng/L	50	SW846 8270C S
Biphenyl	75.0	39.6	ng/L	53	SW846 8270C S
Carbazole	75.0	38.0	ng/L	51	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	36.6	ng/L	49	SW846 8270C S
Chrysene	75.0	40.8	ng/L	54	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	34.8	ng/L	46	SW846 8270C S
Dibenzofuran	75.0	38.8	ng/L	52	SW846 8270C S
Dibenzothiophene	75.0	37.6	ng/L	50	SW846 8270C S
2,3-Dihydroindene	75.0	36.0	ng/L	48	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	29.2	ng/L	39	SW846 8270C S
Fluoranthene	75.0	38.5	ng/L	51	SW846 8270C S
Fluorene	75.0	37.3	ng/L	50	SW846 8270C S

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 **Work Order #...:** LH6D91AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H140000-215

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Indene	**75.0**	**37.8**	**ng/L**	**50**	**SW846 8270C S**
Indeno(1,2,3-cd)pyrene	**75.0**	**36.4**	**ng/L**	**48**	**SW846 8270C S**
Indole	**75.0**	**38.1**	**ng/L**	**51**	**SW846 8270C S**
2-Methylnaphthalene	**75.0**	**37.4**	**ng/L**	**50**	**SW846 8270C S**
3-Methylcholanthrene	**75.0**	**30.8**	**ng/L**	**41**	**SW846 8270C S**
1-Methylnaphthalene	**75.0**	**40.5**	**ng/L**	**54**	**SW846 8270C S**
Naphthalene	**75.0**	**37.0**	**ng/L**	**49**	**SW846 8270C S**
Perylene	**75.0**	**39.9**	**ng/L**	**53**	**SW846 8270C S**
Phenanthrene	**75.0**	**35.5**	**ng/L**	**47**	**SW846 8270C S**
Pyrene	**75.0**	**37.7**	**ng/L**	**50**	**SW846 8270C S**
Quinoline	**75.0**	**39.6**	**ng/L**	**53**	**SW846 8270C S**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	50	(28 - 101)
Fluorene d-10	43	(23 - 84)
Naphthalene-d8	50	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 Work Order #...: LH3AF1AC-MS Matrix.....: WG
MS Lot-Sample #: D9H120307-001 LH3AF1AD-MSD
Date Sampled...: 08/11/09 Date Received..: 08/12/09
Prep Date.....: 08/14/09 Analysis Date..: 08/21/09
Prep Batch #...: 9226215 Analysis Time..: 11:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	74	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	20	(0-50)	SW846 8270C SIM
Acenaphthylene	73	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	21	(0-50)	SW846 8270C SIM
Acridine	74	(30 - 150)			SW846 8270C SIM
	47	(30 - 150)	34	(0-50)	SW846 8270C SIM
Anthracene	70	(30 - 150)			SW846 8270C SIM
	48	(30 - 150)	29	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	41	(30 - 150)			SW846 8270C SIM
	11 a,p	(30 - 150)	109	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	9.6 a	(30 - 150)			SW846 8270C SIM
	5.2 a,p	(30 - 150)	55	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	9.7 a	(30 - 150)			SW846 8270C SIM
	4.4 a,p	(30 - 150)	71	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	8.1 a	(30 - 150)			SW846 8270C SIM
	2.9 a,p	(30 - 150)	90	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	7.0 a	(30 - 150)			SW846 8270C SIM
	2.9 a,p	(30 - 150)	79	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	7.3 a	(30 - 150)			SW846 8270C SIM
	4.1 a,p	(30 - 150)	51	(0-50)	SW846 8270C SIM
2,3-Benzofuran	74	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	18	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	3.6 a	(30 - 150)			SW846 8270C SIM
	3.0 a	(30 - 150)	12	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	2.4 a	(30 - 150)			SW846 8270C SIM
	2.4 a	(30 - 150)	5.1	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	2.0 a	(30 - 150)			SW846 8270C SIM
	1.5 a	(30 - 150)	20	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	1.6 a	(30 - 150)			SW846 8270C SIM
	1.4 a	(30 - 150)	6.8	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	9.6 a	(30 - 150)			SW846 8270C SIM
	4.0 a,p	(30 - 150)	78	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	8.1 a	(30 - 150)			SW846 8270C SIM
	3.5 a,p	(30 - 150)	74	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	69	(30 - 150)			SW846 8270C SIM
	51	(30 - 150)	24	(0-50)	SW846 8270C SIM
Benzo(e)pyrene	8.0 a	(37 - 105)			SW846 8270C SIM
	3.4 a,p	(37 - 105)	76	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	77	(30 - 150)			SW846 8270C SIM
	60	(30 - 150)	20	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 Work Order #...: LH3AF1AC-MS Matrix.....: WG
MS Lot-Sample #: D9H120307-001 LH3AF1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
6-Methylchrysene	25 a	(30 - 150)			SW846 8270C SIM
	7.6 a,p	(30 - 150)	102	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	76	(30 - 150)			SW846 8270C SIM
	54	(30 - 150)	29	(0-50)	SW846 8270C SIM
Biphenyl	73	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	21	(0-50)	SW846 8270C SIM
Carbazole	76	(30 - 150)			SW846 8270C SIM
	52	(30 - 150)	31	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	68	(30 - 150)			SW846 8270C SIM
	49	(30 - 150)	28	(0-50)	SW846 8270C SIM
Chrysene	39	(20 - 136)			SW846 8270C SIM
	14 a,p	(20 - 136)	91	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	3.2 a	(30 - 150)			SW846 8270C SIM
	2.7 a	(30 - 150)	8.9	(0-50)	SW846 8270C SIM
Dibenzofuran	75	(30 - 150)			SW846 8270C SIM
	59	(30 - 150)	19	(0-50)	SW846 8270C SIM
Dibenzothiophene	71	(30 - 150)			SW846 8270C SIM
	52	(30 - 150)	26	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	69	(30 - 150)			SW846 8270C SIM
	50	(30 - 150)	22	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	57	(30 - 150)			SW846 8270C SIM
	33	(30 - 150)	49	(0-50)	SW846 8270C SIM
Fluoranthene	75	(30 - 150)			SW846 8270C SIM
	46	(30 - 150)	43	(0-50)	SW846 8270C SIM
Fluorene	68	(34 - 96)			SW846 8270C SIM
	50	(34 - 96)	25	(0-50)	SW846 8270C SIM
Indene	70	(22 - 86)			SW846 8270C SIM
	54	(22 - 86)	19	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	3.6 a	(30 - 150)			SW846 8270C SIM
	3.4 a	(30 - 150)	0.45	(0-50)	SW846 8270C SIM
Indole	75	(30 - 150)			SW846 8270C SIM
	56	(30 - 150)	24	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	68	(25 - 95)			SW846 8270C SIM
	52	(25 - 95)	20	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	10 a	(30 - 150)			SW846 8270C SIM
	4.2 a,p	(30 - 150)	79	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	75	(30 - 150)			SW846 8270C SIM
	57	(30 - 150)	20	(0-50)	SW846 8270C SIM
Naphthalene	67	(27 - 95)			SW846 8270C SIM
	51	(27 - 95)	18	(0-50)	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 **Work Order #...:** LH3AF1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H120307-001 LH3AF1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**9.1 a**	**(30 - 150)**			**SW846 8270C SIM**
	4.2 a,p	**(30 - 150)**	**70**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**73**	**(30 - 150)**			**SW846 8270C SIM**
	53	**(30 - 150)**	**26**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**71**	**(30 - 150)**			**SW846 8270C SIM**
	41	**(30 - 150)**	**44**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**75**	**(20 - 112)**			**SW846 8270C SIM**
	54	**(20 - 112)**	**27**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	38	(28 - 101)
	13 *	(28 - 101)
Fluorene d-10	63	(23 - 84)
	45	(23 - 84)
Naphthalene-d8	71	(22 - 97)
	55	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 **Work Order #...:** LH3AF1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H120307-001 LH3AF1AD-MSD
Date Sampled...: 08/11/09 **Date Received..:** 08/12/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9226215 **Analysis Time..:** 11:14
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	3.7	78.7	62.2	ng/L	74		SW846 8270C SIM
	3.7	83.1	50.9	ng/L	57	20	SW846 8270C SIM
Acenaphthylene	ND	78.7	57.8	ng/L	73		SW846 8270C SIM
	ND	83.1	46.7	ng/L	56	21	SW846 8270C SIM
Acridine	7.9	78.7	66.0	ng/L	74		SW846 8270C SIM
	7.9	83.1	46.8	ng/L	47	34	SW846 8270C SIM
Anthracene	3.9	78.7	59.3	ng/L	70		SW846 8270C SIM
	3.9	83.1	44.2	ng/L	48	29	SW846 8270C SIM
Benzo(a)anthracene	ND	78.7	32.0	ng/L	41		SW846 8270C SIM
	ND	83.1	9.48	ng/L	11 a,p	109	SW846 8270C SIM
Benzo(b)fluoranthene	ND	78.7	7.60	ng/L	9.6 a		SW846 8270C SIM
	ND	83.1	4.32	ng/L	5.2	55	SW846 8270C SIM
	Qualifiers: a,p						
Benzo(k)fluoranthene	ND	78.7	7.62	ng/L	9.7 a		SW846 8270C SIM
	ND	83.1	3.64	ng/L	4.4	71	SW846 8270C SIM
	Qualifiers: a,p						
7H-Dibenzo[c,g]carbazole	ND	78.7	6.36	ng/L	8.1 a		SW846 8270C SIM
	ND	83.1	2.42	ng/L	2.9	90	SW846 8270C SIM
	Qualifiers: a,p						
Dibenz(a,h)acridine	ND	78.7	5.52	ng/L	7.0 a		SW846 8270C SIM
	ND	83.1	2.38	ng/L	2.9	79	SW846 8270C SIM
	Qualifiers: a,p						
Dibenz(a,j)acridine	ND	78.7	5.72	ng/L	7.3 a		SW846 8270C SIM
	ND	83.1	3.40	ng/L	4.1	51	SW846 8270C SIM
	Qualifiers: a,p						
2,3-Benzofuran	ND	78.7	58.3	ng/L	74		SW846 8270C SIM
	ND	83.1	48.5	ng/L	58	18	SW846 8270C SIM
Benzo(ghi)perylene	ND	78.7	2.83	ng/L	3.6 a		SW846 8270C SIM
	ND	83.1	2.52	ng/L	3.0 a	12	SW846 8270C SIM
Dibenzo(a,e)pyrene	ND	78.7	1.91	ng/L	2.4 a		SW846 8270C SIM
	ND	83.1	2.01	ng/L	2.4 a	5.1	SW846 8270C SIM
Dibenzo(a,i)pyrene	ND	78.7	1.55	ng/L	2.0 a		SW846 8270C SIM
	ND	83.1	1.26	ng/L	1.5 a	20	SW846 8270C SIM
Dibenzo(a,h)pyrene	ND	78.7	1.28	ng/L	1.6 a		SW846 8270C SIM
	ND	83.1	1.19	ng/L	1.4 a	6.8	SW846 8270C SIM
Dibenzo(a,l)pyrene	ND	78.7	7.56	ng/L	9.6 a		SW846 8270C SIM
	ND	83.1	3.33	ng/L	4.0	78	SW846 8270C SIM
	Qualifiers: a,p						
Benzo(a)pyrene	ND	78.7	6.40	ng/L	8.1 a		SW846 8270C SIM
	ND	83.1	2.93	ng/L	3.5	74	SW846 8270C SIM
	Qualifiers: a,p						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 **Work Order #...:** LH3AF1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H120307-001 LH3AF1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,6-Dimethylnaphthalene	ND	78.7	54.6	ng/L	69		SW846 8270C SIM
	ND	83.1	42.7	ng/L	51	24	SW846 8270C SIM
Benzo(e)pyrene	ND	78.7	6.28	ng/L	8.0 a		SW846 8270C SIM
	ND	83.1	2.81	ng/L	3.4	76	SW846 8270C SIM
	Qualifiers:	a,p					
Benzo(b)thiophene	ND	78.7	60.7	ng/L	77		SW846 8270C SIM
	ND	83.1	49.7	ng/L	60	20	SW846 8270C SIM
6-Methylchrysene	ND	78.7	19.5	ng/L	25 a		SW846 8270C SIM
	ND	83.1	6.31	ng/L	7.6	102	SW846 8270C SIM
	Qualifiers:	a,p					
1-Methylphenanthrene	ND	78.7	59.6	ng/L	76		SW846 8270C SIM
	ND	83.1	44.5	ng/L	54	29	SW846 8270C SIM
Biphenyl	ND	78.7	57.7	ng/L	73		SW846 8270C SIM
	ND	83.1	46.7	ng/L	56	21	SW846 8270C SIM
Carbazole	1.4	78.7	61.2	ng/L	76		SW846 8270C SIM
	1.4	83.1	44.8	ng/L	52	31	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	ND	78.7	53.5	ng/L	68		SW846 8270C SIM
	ND	83.1	40.3	ng/L	49	28	SW846 8270C SIM
Chrysene	ND	78.7	30.9	ng/L	39		SW846 8270C SIM
	ND	83.1	11.6	ng/L	14 a,p	91	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	78.7	2.48	ng/L	3.2 a		SW846 8270C SIM
	ND	83.1	2.27	ng/L	2.7 a	8.9	SW846 8270C SIM
Dibenzofuran	ND	78.7	59.3	ng/L	75		SW846 8270C SIM
	ND	83.1	48.9	ng/L	59	19	SW846 8270C SIM
Dibenzothiophene	ND	78.7	56.0	ng/L	71		SW846 8270C SIM
	ND	83.1	43.2	ng/L	52	26	SW846 8270C SIM
2,3-Dihydroindene	9.9	78.7	64.1	ng/L	69		SW846 8270C SIM
	9.9	83.1	51.5	ng/L	50	22	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	ND	78.7	45.0	ng/L	57		SW846 8270C SIM
	ND	83.1	27.4	ng/L	33	49	SW846 8270C SIM
Fluoranthene	ND	78.7	58.7	ng/L	75		SW846 8270C SIM
	ND	83.1	38.1	ng/L	46	43	SW846 8270C SIM
Fluorene	ND	78.7	53.2	ng/L	68		SW846 8270C SIM
	ND	83.1	41.5	ng/L	50	25	SW846 8270C SIM
Indene	4.7	78.7	59.9	ng/L	70		SW846 8270C SIM
	4.7	83.1	49.4	ng/L	54	19	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	78.7	2.85	ng/L	3.6 a		SW846 8270C SIM
	ND	83.1	2.86	ng/L	3.4 a	0.45	SW846 8270C SIM
Indole	ND	78.7	58.8	ng/L	75		SW846 8270C SIM
	ND	83.1	46.4	ng/L	56	24	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H120307 **Work Order #...:** LH3AF1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H120307-001 LH3AF1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2-Methylnaphthalene	**2.8**	**78.7**	**56.0**	**ng/L**	**68**		**SW846 8270C SIM**
	2.8	**83.1**	**45.6**	**ng/L**	**52**	**20**	**SW846 8270C SIM**
3-Methylcholanthrene	**ND**	**78.7**	**8.11**	**ng/L**	**10 a**		**SW846 8270C SIM**
	ND	**83.1**		**ng/L**	**4.2**	**79**	**SW846 8270C SIM**
	Qualifiers: a,p						
1-Methylnaphthalene	**1.7**	**78.7**	**60.4**	**ng/L**	**75**		**SW846 8270C SIM**
	1.7	**83.1**	**49.3**	**ng/L**	**57**	**20**	**SW846 8270C SIM**
Naphthalene	**6.4**	**78.7**	**58.8**	**ng/L**	**67**		**SW846 8270C SIM**
	6.4	**83.1**	**49.2**	**ng/L**	**51**	**18**	**SW846 8270C SIM**
Perylene	**ND**	**78.7**	**7.15**	**ng/L**	**9.1 a**		**SW846 8270C SIM**
	ND	**83.1**		**ng/L**	**4.2**	**70**	**SW846 8270C SIM**
	Qualifiers: a,p						
Phenanthrene	**ND**	**78.7**	**57.4**	**ng/L**	**73**		**SW846 8270C SIM**
	ND	**83.1**	**44.1**	**ng/L**	**53**	**26**	**SW846 8270C SIM**
Pyrene	**4.6**	**78.7**	**60.1**	**ng/L**	**71**		**SW846 8270C SIM**
	4.6	**83.1**	**38.3**	**ng/L**	**41**	**44**	**SW846 8270C SIM**
Quinoline	**ND**	**78.7**	**59.2**	**ng/L**	**75**		**SW846 8270C SIM**
	ND	**83.1**	**45.2**	**ng/L**	**54**	**27**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	38	(28 - 101)
	13 *	(28 - 101)
Fluorene d-10	63	(23 - 84)
	45	(23 - 84)
Naphthalene-d8	71	(22 - 97)
	55	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Chain of Custody Record

3.4, 3.6, 3.7, 2.8, 2.5, 2.9, 1.6 dlc 8/12/09 IRI

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

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TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/11/09	115114
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH-PAHS	PAH-PDT75	Special Instructions/ Conditions of Receipt
W24-081109	8/11/09	1335		X			6							X	
W24D-081109		1340													
W24FB-081109		1310													
W24FBD-081109		1320													
W24MS-081109		1345													
W24MSD-081109		1350													
SLP4T-081109		0818											X		Extended list
SLP3-081109		0940											X		
SLP6-081109		0900											X		
W48-081109		1200											X		
W33R-081109		1035												X	
W410-081109		1230												X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/11/09	1500	1. Received By	8/12/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

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TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	~~Sto~~ Scott Anderson	8/11/09	115113
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PRTS	Special Instructions/ Conditions of Receipt
SLP10T-081109	8/11/09	0925		X			6						X	Extended list
SLP10TFB-081109 *	↓	0930		X			6						X	Extended list
														* Only extract SLP10TFB-081109. Contact Drew Tarara at 651-367-2335 for additional instruction.

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/11/09	1500	1. Received By	8/12/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

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Memorandum

Date: March 7, 2010

To: Bill Gregg

From: Linda Adams/Westford

Subject: Data Validation
PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9E120307
Appendix J

Distribution: R. Kennedy/Westford

60145681 File
SA034pahlms

SUMMARY

Full validation was performed on the data for the analysis of nine aqueous samples and three field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C, selected ion monitoring (SIM) method. The samples were collected on August 11, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9E120307.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. The nondetect results for several compounds in sample W24-081109 were rejected due to matrix spike and/or matrix spike duplicate recoveries of <10%. Selected other data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W24-081109	W24D-081109 (Field duplicate of W24-081109)
W24FB-081109 (Field blank)	W24FBD-081109 (Field blank duplicate)
SLP4T-081109	SLP3-081109
SLP6-081109	W48-081109

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Sample IDs	Sample IDs
W33R-081109	W410-081109
SLP10T-081109	SLP10TFB-081109

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectrometry (GC/MS) tuning
- Initial and continuing calibrations
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Internal standard performance
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- Sample W410-081109 had the results for fluoranthene reported on both the Form I for the undiluted analysis and on the Form I for the 50x diluted analysis. The result for fluoranthene should have only been reported from the undiluted analysis since it was within the calibration range. Additionally, the laboratory did not report the result for carbazole from the 50x diluted analysis. The laboratory inadvertently reported the fluoranthene result from the 50x dilution when the carbazole result should have been reported instead. The laboratory was contacted regarding this discrepancy and resubmitted the Form I for the 50x diluted analysis. No validation action was taken on this basis other than this notation.

The target compounds for the samples in this data set are listed on Worksheet #15 of the project specific QAPP. The following discrepancies were noted.

- The laboratory was unable to report the results for benzo(j)fluoranthene since this compound co-elutes with either benzo(k)fluoranthene or benzo(b)fluoranthene. With the exception of sample W33R-081109, benzo(b)fluoranthene and benzo(k)fluoranthene were not detected in any samples. Qualification of the data on this basis was not required. Benzo(b)fluoranthene was detected below the sample quantitation limit (SQL) in sample W33R-081109 and was therefore qualified as estimated (J) by the laboratory. Further qualification of this result was not required. It should be noted that the results for benzo(b)fluoranthene and

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benzo(k)fluoranthene were qualified by the laboratory as "K" in sample W33R-081109 since they co-elute. The "K" qualifier was removed during validation.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

Six of the seven cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C. The remaining cooler temperature (1.6°C) fell slightly below the QC acceptance criteria. No validation action was taken on the basis of this minor nonconformance.

GC/MS Tuning

The frequency and abundance of the decafluorotriphenylphosphine (DFTPP) tuning results were within the QC acceptance criteria. All samples were analyzed within 12 hours from the DFTPP tuning.

The method acceptance limits were met regarding the evaluation of DDT, pentachlorophenol, and benzidine degradation and/or tailing.

Initial and Continuing Calibrations

The percent relative standard deviations (%RSDs) and the response factors (RFs) of all target compounds in the initial calibration and the percent differences (%Ds) and the RFs in the continuing calibrations associated with all sample analyses were within the QC acceptance criteria with the following exceptions.

Calibration	Compound	%RSD (IC)	Actions (Detects/Nondetects)
IC 8/19/09	Naphthalene	16.7	J/UJ
Associated samples: All samples in this sample set except the 100x dilution of sample W410-081109			

Laboratory Blanks/Field Blanks

Target compounds were not detected in the laboratory method blank.

The following compounds were detected in the aqueous field blanks. No validation actions were necessary since these results were for informational purposes only.

W24FB-081109	
Compound	**Concentration (ng/L)**
Benzo(b)thiophene	2.8 J
2-Methylnaphthalene	0.64 J
Naphthalene	0.89 J

W24FBD-081109	
Compound	**Concentration (ng/L)**
Indene	3.3 J

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W24FBD-081109	
Compound	**Concentration (ng/L)**
2-Methylnaphthalene	1.9 J
1-Methylnaphthalene	1.4 J
Naphthalene	4.7 J

SLP10TFB-081109	
Compound	**Concentration (ng/L)**
2-Methylnaphthalene	1.1 J
Naphthalene	2.5 J
Pyrene	1.6 J

Surrogate Spike Recoveries

The surrogate recoveries were within the QC acceptance criteria in all sample analyses with the following exceptions. Qualification of the data for these samples was not required since only one of three surrogate recoveries fell below the QC acceptance

Sample ID	**Surrogate**			**Actions**	
	Chrysene-d12	**Fluorene-d10**	**Naphthalene-d8**	**Detects**	**Nondetects**
W33R-081109	12	ok	ok	Accept	Accept
SLP4T-081109	29	ok	ok	Accept	Accept
QAPP QC Limits	**30-118**	**41-162**	**30-118**		

Internal Standard Performance

Internal standard performance met the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on sample W24-081109 from this data set. All target analytes were spiked. All percent recoveries (%Rs) and relative percent differences (RPDs) were within the QC acceptance criteria with the following exceptions.

Compound	**MS %R**	**MSD %R**	**RPD**	**Laboratory QC limits %R (RPD)**	**Action (Detects/Nondetects)**
Benzo(a)anthracene	ok	11	109	30-150 (50)	J/UJ
Benzo(b)fluoranthene	9.6	5.2	55	30-150 (50)	J/R
Benzo(k)fluoranthene	9.7	4.4	71	30-150 (50)	J/R
Benzo(ghi)perylene	3.6	3.0	ok	30-150 (50)	J/R
Benzo(a)pyrene	8.1	3.5	74	30-150 (50)	J/R
Benzo(e)pyrene	8.0	3.4	76	30-150 (50)*	J/R
Chrysene	ok	14	91	30-132 (50)*	J/UJ
Dibenzo(ah)anthracene	3.2	2.7	ok	30-150 (50)	J/R
Indeno(123-cd)pyrene	3.6	3.4	ok	30-150 (50)	J/R
Perylene	9.1	4.2	70	30-150 (50)	J/R
Associated sample: W24-081109					

*QAPP QC limits

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LCS Results

All target analytes were spiked. The %Rs were within the QC acceptance criteria for the LCS analysis.

Field Duplicate Results

Samples W24-081109 and W24DUP-081109 were the field duplicate pair analyzed with this data set. Note that samples W24FB-081109 and W24FBD-081109 are not field samples and should not be considered representative of the sample matrix.

The results for the detected compounds in samples W24-081109 and W24D-081109 and their RPDs are tabulated below. The RPDs for 2,3-benzofuran and benzo(b)thiophene were not calculable (NC) due to nondetect results in sample W24-081109. Precision was deemed acceptable for these compounds since the detected results were <5x the SQL in field duplicate sample W24D-081109. The remaining RPDs were within the acceptance criteria.

Compound	W24-081109 (ng/L)	W24D-081109 (ng/L)	RPD
Acenaphthene	3.7 J	3.3 J	11
Acridine	7.9	7.7	3
Anthracene	3.9 J	4.1 J	5
2,3-Benzofuran	5.4 U	1.0 J	NC
Benzo(b)thiophene	5.2 U	0.96 J	NC
Carbazole	1.4 J	1.4 J	0
2,3-Dihydroindene	9.9	10	1
Indene	4.7	5.4	14
2-Methylnaphthalene	2.8 J	2.8 J	0
1-Methylnaphthalene	1.7 J	1.8 J	6
Naphthalene	6.4 J	7.0 J	9
Pyrene	4.6	4.0 j	14
Criteria: Aqueous RPD ≤ 30, if both sample and duplicate results are > 5x sample quantitation limit (SQL). The RPD criterion is doubled if both sample and duplicate results are <5x SQL.			

The results for the detected compounds in field blank samples W24FB-081109 and W24FBD-081109 and their RPDs are tabulated below. The RPDs for benzo(b)thiophene, indene, and 1-methylnaphthalene were NC due to nondetect results in one of the samples. Precision was deemed acceptable for these compounds since the detected results in the other sample were <5x the SQL. The RPDs for 2-methylnaphthalene and naphthalene were deemed acceptable since the detected results for these compounds in field blank sample W24FB-081109 and the field duplicate blank sample W24FBD-081109 were all < 5x the SQL and the RPD criterion was doubled. The remaining RPDs were within the acceptance criteria.

Compound	W24FB-081109 (ng/L)	W24FBD-081109 (ng/L)	RPD
Benzo(b)thiophene	3.7 J	5.2 U	NC
Indene	4.7 U	3.3 J	NC
2-Methylnaphthalene	1.3 J	1.9 J	38
1-Methylnaphthalene	5.6 U	1.4 J	NC

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Compound	W24FB-081109 (ng/L)	W24FBD-081109 (ng/L)	RPD
Naphthalene	2.9 J	4.7 J	47
Criteria: Aqueous RPD ≤ 30, if both sample and duplicate results are > 5x sample quantitation limit (SQL). The RPD criterion is doubled if both sample and duplicate results are <5x SQL.			

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted.

The QAPP specified reporting limits were met with the following exceptions. The following table summarizes the reporting limits which exceeded the QAPP specified reporting limits for ppt analysis.

Compound	QAPP RL (ng/L)	Lab RL (ng/L)
Acridine	6.2	6.5
Perylene	3.3	3.8
3-Methylcholanthrene*	4.4	5.0
*This compound reported in samples SLP4T-081109, SLP10T-081109, and SLP10TFB-081109 only.		

Sample W410-081109 was initially analyzed undiluted. The results for several compounds exceeded the calibration range in the initial undiluted analysis. The sample was reanalyzed at a 50x dilution and a 100x dilution in order to report all compounds within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

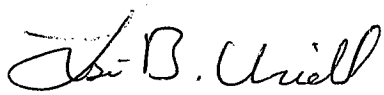
Project: Reilly Tar & Chemical Corporation

Lot #: D9H140241

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.



Lisa B. Uriell
Project Manager

August 26, 2009

CASE NARRATIVE
D9H140241

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Thirteen samples plus one set of MS/MSD samples were received under chain of custody on August 14, 2009. The samples were received at temperatures of 5.1°C, 4.3°C and 5.2°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met with the exception of sample P312-081309 (D9H140241-002).

Sample P312-081309 was originally extracted within the recommended sample holding time; however, due to analyst error, the extract was dropped and spilled at concentration. The 8270C extraction for sample P312-081309 was performed one day outside the recommended sample holding time.

Sample W421-081309 was analyzed at two different dilutions to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analysis performed at a dilution, because the extract was diluted beyond the ability to quantitate recoveries.

The MS/MSD associated with QC batch 9230145 was performed using sample W428-081309, as requested. The MS/MSD exhibited a Matrix Spike Duplicate percent recovery outside the control limits for Indole. The MS/MSD exhibited Relative Percent Difference (RPD) data outside the control limits for Indole. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

The MS/MSD associated with QC batch 9233054 was performed using a sample from another lot. The MS/MSD exhibited percent recoveries outside the control limits for Indole. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

No other anomalies were noted.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9H140241
ANALYSIS: SW846-8270C

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	62	62
MB Surrogates	6	6
LCS	14	14
LCS Surrogates	6	6
FB/FBD	62	62
MS	7	7
MS Surrogates	3	3
MSD	7	7
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	39	39
Samples and QC Internal Standard Area	60	60
TOTAL	**307**	**307**
% Completeness	**100.0%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9H140241					
Sample: W428-081309		DUP: W428D-081309			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	ND	Acenaphthene	ND	0.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	ND	2,3-Dihydroindene	ND	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	ND	Naphthalene	ND	0.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND. Considered acceptable if the positive

EXECUTIVE SUMMARY - Detection Highlights

D9H140241

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W422-081309 08/13/09 11:45 003				
Acenaphthene	5.4 J	10	ug/L	SW846 8270C
W426-081309 08/13/09 10:30 008				
Acenaphthene	38	10	ug/L	SW846 8270C
Anthracene	2.1 J	10	ug/L	SW846 8270C
Carbazole	5.3 J	10	ug/L	SW846 8270C
Dibenzofuran	9.8 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	5.7 J	10	ug/L	SW846 8270C
Fluorene	17	10	ug/L	SW846 8270C
Indene	1.4 J	10	ug/L	SW846 8270C
1-Methylnaphthalene	24	10	ug/L	SW846 8270C
Phenanthrene	13	10	ug/L	SW846 8270C
W421-081309 08/13/09 11:10 009				
Acenaphthene	130	10	ug/L	SW846 8270C
Acridine	6.6 J	10	ug/L	SW846 8270C
Anthracene	26	10	ug/L	SW846 8270C
Benzo(a)anthracene	31	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	30	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	12	10	ug/L	SW846 8270C
Benzo(ghi)perylene	11	10	ug/L	SW846 8270C
Benzo(a)pyrene	21	10	ug/L	SW846 8270C
Benzo(e)pyrene	15	10	ug/L	SW846 8270C
Benzo(b)thiophene	29	10	ug/L	SW846 8270C
Biphenyl	9.8 J	10	ug/L	SW846 8270C
Carbazole	48	10	ug/L	SW846 8270C
Chrysene	23	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	3.0 J	10	ug/L	SW846 8270C
Dibenzofuran	46	10	ug/L	SW846 8270C
Dibenzothiophene	16	10	ug/L	SW846 8270C
2,3-Dihydroindene	110	10	ug/L	SW846 8270C
Fluoranthene	120	10	ug/L	SW846 8270C
Fluorene	78	10	ug/L	SW846 8270C
Indene	31	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	8.7 J	10	ug/L	SW846 8270C
2-Methylnaphthalene	35	10	ug/L	SW846 8270C
1-Methylnaphthalene	90	10	ug/L	SW846 8270C
Naphthalene	220	40	ug/L	SW846 8270C
Perylene	5.4 J	10	ug/L	SW846 8270C
Phenanthrene	200	40	ug/L	SW846 8270C
Pyrene	91	10	ug/L	SW846 8270C

METHODS SUMMARY

D9H140241

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9H140241

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Ashley Wolfe	004211

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9H140241

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LH7FQ	001	W120-081309	08/13/09	13:30
LH7FT	002	P312-081309	08/13/09	13:00
LH7FW	003	W422-081309	08/13/09	11:45
LH7FX	004	W428-081309	08/13/09	09:00
LH7F0	005	W428D-081309	08/13/09	09:05
LH7F2	006	W428FB-081309	08/13/09	09:20
LH7F3	007	W428FBD-081309	08/13/09	09:25
LH7F5	008	W426-081309	08/13/09	10:30
LH7F6	009	W421-081309	08/13/09	11:10
LH7F7	010	W136-081309	08/13/09	15:20
LH7F8	011	W131-081309	08/13/09	15:00
LH7F9	012	W431-081309	08/13/09	14:00
LH7GA	013	W128-081309	08/13/09	14:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W120-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-001 **Work Order #...:** LH7FQ1AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 10:28
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	89	(30 - 160)
Fluorene d-10	81	(36 - 127)
Naphthalene-d8	69	(37 - 107)

City of Saint Louis Park

Client Sample ID: P312-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-002 **Work Order #...:** LH7FT1AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 12:31
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	94	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	82	(37 - 107)

City of Saint Louis Park

Client Sample ID: W422-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-003 **Work Order #...:** LH7FW1AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 11:03
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**5.4 J**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	55	(30 - 160)
Fluorene d-10	79	(36 - 127)
Naphthalene-d8	77	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W428-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-004 **Work Order #...:** LH7FX1AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 11:39
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	70	(30 - 160)
Fluorene d-10	81	(36 - 127)
Naphthalene-d8	65	(37 - 107)

City of Saint Louis Park

Client Sample ID: W428D-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-005 **Work Order #...:** LH7F01AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 13:25
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	65	(30 - 160)
Fluorene d-10	80	(36 - 127)
Naphthalene-d8	58	(37 - 107)

City of Saint Louis Park

Client Sample ID: W428FB-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-006 **Work Order #...:** LH7F21AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 14:01
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	92	(30 - 160)
Fluorene d-10	87	(36 - 127)
Naphthalene-d8	86	(37 - 107)

City of Saint Louis Park

Client Sample ID: W428FBD-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-007 **Work Order #...:** LH7F31AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 14:37
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	96	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	90	(37 - 107)

City of Saint Louis Park

Client Sample ID: W426-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-008 **Work Order #...:** LH7F51AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 15:12
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**38**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	**2.1 J**	**10**	**ug/L**
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**5.3 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**9.8 J**	**10**	**ug/L**
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**5.7 J**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**17**	**10**	**ug/L**
Indene	**1.4 J**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**24**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	**13**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	75	(30 - 160)
Fluorene d-10	78	(36 - 127)
Naphthalene-d8	61	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W421-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-009 Work Order #...: LH7F61AA Matrix.....: WG
Date Sampled...: 08/13/09 Date Received..: 08/14/09
Prep Date.....: 08/18/09 Analysis Date..: 08/23/09
Prep Batch #...: 9230145 Analysis Time..: 13:45
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	130	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	6.6 J	10	ug/L
Anthracene	26	10	ug/L
Benzo(a)anthracene	31	10	ug/L
Benzo(b)fluoranthene	30	10	ug/L
Benzo(k)fluoranthene	12	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	11	10	ug/L
Benzo(a)pyrene	21	10	ug/L
Benzo(e)pyrene	15	10	ug/L
Benzo(b)thiophene	29	10	ug/L
Biphenyl	9.8 J	10	ug/L
Carbazole	48	10	ug/L
Chrysene	23	10	ug/L
Dibenzo(a,h)anthracene	3.0 J	10	ug/L
Dibenzofuran	46	10	ug/L
Dibenzothiophene	16	10	ug/L
2,3-Dihydroindene	110	10	ug/L
Fluoranthene	120	10	ug/L
Fluorene	78	10	ug/L
Indene	31	10	ug/L
Indeno(1,2,3-cd)pyrene	8.7 J	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	35	10	ug/L
1-Methylnaphthalene	90	10	ug/L
Perylene	5.4 J	10	ug/L
Pyrene	91	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	87	(30 - 160)
Fluorene d-10	90	(36 - 127)
Naphthalene-d8	73	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W421-081309

GC/MS Semivolatiles

Lot-Sample #...:	D9H140241-009	**Work Order #...:**	LH7F62AA	**Matrix.....:**	WG
Date Sampled...:	08/13/09	**Date Received..:**	08/14/09		
Prep Date.....:	08/18/09	**Analysis Date..:**	08/22/09		
Prep Batch #...:	9230145	**Analysis Time..:**	10:40		
Dilution Factor:	4				
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Naphthalene	**220**	**40**	**ug/L**
Phenanthrene	**200**	**40**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

City of Saint Louis Park

Client Sample ID: W136-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-010 **Work Order #...:** LH7F71AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 16:24
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	63	(30 - 160)
Fluorene d-10	87	(36 - 127)
Naphthalene-d8	88	(37 - 107)

City of Saint Louis Park

Client Sample ID: W131-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-011 **Work Order #...:** LH7F81AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 17:00
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	84	(30 - 160)
Fluorene d-10	79	(36 - 127)
Naphthalene-d8	75	(37 - 107)

City of Saint Louis Park

Client Sample ID: W431-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-012 **Work Order #...:** LH7F91AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 17:36
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	83	(30 - 160)
Fluorene d-10	77	(36 - 127)
Naphthalene-d8	57	(37 - 107)

City of Saint Louis Park

Client Sample ID: W128-081309

GC/MS Semivolatiles

Lot-Sample #...: D9H140241-013 **Work Order #...:** LH7GA1AA **Matrix.....:** WG
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 18:12
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	81	(30 - 160)
Fluorene d-10	77	(36 - 127)
Naphthalene-d8	61	(37 - 107)

QC DATA ASSOCIATION SUMMARY

D9H140241

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C		9230145	9230097
002	WG	SW846 8270C		9233054	9233030
003	WG	SW846 8270C		9230145	9230097
004	WG	SW846 8270C		9230145	9230097
005	WG	SW846 8270C		9230145	9230097
006	WG	SW846 8270C		9230145	9230097
007	WG	SW846 8270C		9230145	9230097
008	WG	SW846 8270C		9230145	9230097
009	WG	SW846 8270C		9230145	9230097
010	WG	SW846 8270C		9230145	9230097
011	WG	SW846 8270C		9230145	9230097
012	WG	SW846 8270C		9230145	9230097
013	WG	SW846 8270C		9230145	9230097

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJAGA1AA **Matrix.....:** WATER
MB Lot-Sample #: D9H180000-145

Prep Date.....: 08/18/09 **Analysis Time..:** 08:42
Analysis Date..: 08/21/09 **Prep Batch #...:** 9230145
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	95	(30 - 160)
Fluorene d-10	85	(36 - 127)
Naphthalene-d8	77	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJJE91AA **Matrix.....:** WATER
MB Lot-Sample #: D9H210000-054

Prep Date.....: 08/21/09 **Analysis Time..:** 11:20
Analysis Date..: 08/25/09 **Prep Batch #...:** 9233054
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	97	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	85	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 Work Order #...: LJAGA1AC Matrix.....: WATER
LCS Lot-Sample#: D9H180000-145
Prep Date.....: 08/18/09 Analysis Date..: 08/21/09
Prep Batch #...: 9230145 Analysis Time..: 09:18
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	87	(30 - 150)	SW846 8270C
Acenaphthylene	87	(30 - 150)	SW846 8270C
Acridine	93	(30 - 150)	SW846 8270C
Anthracene	97	(30 - 150)	SW846 8270C
Benzo(a)anthracene	96	(30 - 150)	SW846 8270C
Benzo(b)fluoranthene	90	(30 - 150)	SW846 8270C
Benzo(k)fluoranthene	96	(30 - 150)	SW846 8270C
7H-Dibenzo[c,g]carbazole	56	(30 - 150)	SW846 8270C
Dibenz(a,h)acridine	94	(30 - 150)	SW846 8270C
Dibenz(a,j)acridine	92	(30 - 150)	SW846 8270C
2,3-Benzofuran	64	(30 - 150)	SW846 8270C
Dibenzo(a,e)pyrene	54	(30 - 150)	SW846 8270C
Benzo(ghi)perylene	97	(30 - 150)	SW846 8270C
Dibenzo(a,i)pyrene	56	(30 - 150)	SW846 8270C
Dibenzo(a,h)pyrene	48	(30 - 150)	SW846 8270C
Dibenzo(a,l)pyrene	52	(30 - 150)	SW846 8270C
Benzo(a)pyrene	95	(30 - 150)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	79	(30 - 150)	SW846 8270C
2,6-Dimethylnaphthalene	80	(30 - 150)	SW846 8270C
Benzo(e)pyrene	97	(30 - 150)	SW846 8270C
3-Methylcholanthrene	94	(30 - 150)	SW846 8270C
Benzo(b)thiophene	71	(30 - 150)	SW846 8270C
6-Methylchrysene	57	(30 - 150)	SW846 8270C
1-Methylphenanthrene	58	(30 - 150)	SW846 8270C
Biphenyl	81	(30 - 150)	SW846 8270C
Carbazole	100	(30 - 150)	SW846 8270C
2,3,5-Trimethylnaphthalen	91	(30 - 150)	SW846 8270C
Chrysene	96	(43 - 124)	SW846 8270C
Dibenzo(a,h)anthracene	95	(30 - 150)	SW846 8270C
Dibenzofuran	90	(30 - 150)	SW846 8270C
Dibenzothiophene	95	(30 - 150)	SW846 8270C
2,3-Dihydroindene	43	(30 - 150)	SW846 8270C
Fluoranthene	96	(30 - 150)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJAGA1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H180000-145

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**92**	**(51 - 120)**	**SW846 8270C**
Indene	**55**	**(49 - 108)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**96**	**(30 - 150)**	**SW846 8270C**
Indole	**88**	**(30 - 150)**	**SW846 8270C**
2-Methylnaphthalene	**69**	**(47 - 138)**	**SW846 8270C**
1-Methylnaphthalene	**71**	**(30 - 150)**	**SW846 8270C**
Naphthalene	**62**	**(43 - 128)**	**SW846 8270C**
Perylene	**95**	**(30 - 150)**	**SW846 8270C**
Phenanthrene	**95**	**(30 - 150)**	**SW846 8270C**
Pyrene	**96**	**(30 - 150)**	**SW846 8270C**
Quinoline	**87**	**(40 - 126)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	101	(30 - 160)
Fluorene d-10	93	(36 - 127)
Naphthalene-d8	83	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 Work Order #...: LJAGA1AC Matrix.....: WATER
LCS Lot-Sample#: D9H180000-145
Prep Date.....: 08/18/09 Analysis Date..: 08/21/09
Prep Batch #...: 9230145 Analysis Time..: 09:18
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	50.0	43.3	ug/L	87	SW846 8270C
Acenaphthylene	50.0	43.5	ug/L	87	SW846 8270C
Acridine	50.0	46.5	ug/L	93	SW846 8270C
Anthracene	50.0	48.7	ug/L	97	SW846 8270C
Benzo(a)anthracene	50.0	48.2	ug/L	96	SW846 8270C
Benzo(b)fluoranthene	50.0	45.0	ug/L	90	SW846 8270C
Benzo(k)fluoranthene	50.0	47.9	ug/L	96	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	28.0	ug/L	56	SW846 8270C
Dibenz(a,h)acridine	50.0	47.2	ug/L	94	SW846 8270C
Dibenz(a,j)acridine	50.0	45.8	ug/L	92	SW846 8270C
2,3-Benzofuran	50.0	31.9	ug/L	64	SW846 8270C
Dibenzo(a,e)pyrene	50.0	27.0	ug/L	54	SW846 8270C
Benzo(ghi)perylene	50.0	48.7	ug/L	97	SW846 8270C
Dibenzo(a,i)pyrene	50.0	27.8	ug/L	56	SW846 8270C
Dibenzo(a,h)pyrene	50.0	23.9	ug/L	48	SW846 8270C
Dibenzo(a,l)pyrene	50.0	25.8	ug/L	52	SW846 8270C
Benzo(a)pyrene	50.0	47.7	ug/L	95	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	39.3	ug/L	79	SW846 8270C
2,6-Dimethylnaphthalene	50.0	40.1	ug/L	80	SW846 8270C
Benzo(e)pyrene	50.0	48.4	ug/L	97	SW846 8270C
3-Methylcholanthrene	50.0	47.2	ug/L	94	SW846 8270C
Benzo(b)thiophene	50.0	35.4	ug/L	71	SW846 8270C
6-Methylchrysene	50.0	28.4	ug/L	57	SW846 8270C
1-Methylphenanthrene	50.0	28.9	ug/L	58	SW846 8270C
Biphenyl	50.0	40.3	ug/L	81	SW846 8270C
Carbazole	50.0	49.8	ug/L	100	SW846 8270C
2,3,5-Trimethylnaphthalen	50.0	45.4	ug/L	91	SW846 8270C
Chrysene	50.0	48.2	ug/L	96	SW846 8270C
Dibenzo(a,h)anthracene	50.0	47.5	ug/L	95	SW846 8270C
Dibenzofuran	50.0	45.1	ug/L	90	SW846 8270C
Dibenzothiophene	50.0	47.5	ug/L	95	SW846 8270C
2,3-Dihydroindene	50.0	21.4	ug/L	43	SW846 8270C
Fluoranthene	50.0	48.2	ug/L	96	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJAGA1AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H180000-145

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**50.0**	**45.8**	**ug/L**	**92**	**SW846 8270C**
Indene	**50.0**	**27.6**	**ug/L**	**55**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**50.0**	**47.9**	**ug/L**	**96**	**SW846 8270C**
Indole	**50.0**	**44.0**	**ug/L**	**88**	**SW846 8270C**
2-Methylnaphthalene	**50.0**	**34.3**	**ug/L**	**69**	**SW846 8270C**
1-Methylnaphthalene	**50.0**	**35.4**	**ug/L**	**71**	**SW846 8270C**
Naphthalene	**50.0**	**31.1**	**ug/L**	**62**	**SW846 8270C**
Perylene	**50.0**	**47.6**	**ug/L**	**95**	**SW846 8270C**
Phenanthrene	**50.0**	**47.7**	**ug/L**	**95**	**SW846 8270C**
Pyrene	**50.0**	**48.2**	**ug/L**	**96**	**SW846 8270C**
Quinoline	**50.0**	**43.7**	**ug/L**	**87**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	101	(30 - 160)
Fluorene d-10	93	(36 - 127)
Naphthalene-d8	83	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 Work Order #...: LJJE91AC Matrix.....: WATER
LCS Lot-Sample#: D9H210000-054
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 11:55
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	82	(30 - 150)	SW846 8270C
Acenaphthylene	83	(30 - 150)	SW846 8270C
Acridine	92	(30 - 150)	SW846 8270C
Anthracene	91	(30 - 150)	SW846 8270C
Benzo(a)anthracene	91	(30 - 150)	SW846 8270C
Benzo(b)fluoranthene	90	(30 - 150)	SW846 8270C
Benzo(k)fluoranthene	86	(30 - 150)	SW846 8270C
7H-Dibenzo[c,g]carbazole	54	(30 - 150)	SW846 8270C
Dibenz(a,h)acridine	93	(30 - 150)	SW846 8270C
Dibenz(a,j)acridine	94	(30 - 150)	SW846 8270C
2,3-Benzofuran	85	(30 - 150)	SW846 8270C
Dibenzo(a,e)pyrene	56	(30 - 150)	SW846 8270C
Benzo(ghi)perylene	96	(30 - 150)	SW846 8270C
Dibenzo(a,i)pyrene	58	(30 - 150)	SW846 8270C
Dibenzo(a,h)pyrene	43	(30 - 150)	SW846 8270C
Dibenzo(a,l)pyrene	51	(30 - 150)	SW846 8270C
Benzo(a)pyrene	90	(30 - 150)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	69	(30 - 150)	SW846 8270C
2,6-Dimethylnaphthalene	78	(30 - 150)	SW846 8270C
Benzo(e)pyrene	92	(30 - 150)	SW846 8270C
3-Methylcholanthrene	80	(30 - 150)	SW846 8270C
Benzo(b)thiophene	87	(30 - 150)	SW846 8270C
6-Methylchrysene	54	(30 - 150)	SW846 8270C
1-Methylphenanthrene	54	(30 - 150)	SW846 8270C
Biphenyl	81	(30 - 150)	SW846 8270C
Carbazole	94	(30 - 150)	SW846 8270C
2,3,5-Trimethylnaphthalen	83	(30 - 150)	SW846 8270C
Chrysene	93	(43 - 124)	SW846 8270C
Dibenzo(a,h)anthracene	93	(30 - 150)	SW846 8270C
Dibenzofuran	86	(30 - 150)	SW846 8270C
Dibenzothiophene	89	(30 - 150)	SW846 8270C
2,3-Dihydroindene	82	(30 - 150)	SW846 8270C
Fluoranthene	90	(30 - 150)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJJE91AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H210000-054

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**84**	**(51 - 120)**	**SW846 8270C**
Indene	**85**	**(49 - 108)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**94**	**(30 - 150)**	**SW846 8270C**
Indole	**87**	**(30 - 150)**	**SW846 8270C**
2-Methylnaphthalene	**82**	**(47 - 138)**	**SW846 8270C**
1-Methylnaphthalene	**83**	**(30 - 150)**	**SW846 8270C**
Naphthalene	**83**	**(43 - 128)**	**SW846 8270C**
Perylene	**91**	**(30 - 150)**	**SW846 8270C**
Phenanthrene	**91**	**(30 - 150)**	**SW846 8270C**
Pyrene	**90**	**(30 - 150)**	**SW846 8270C**
Quinoline	**92**	**(40 - 126)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	99	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	85	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 Work Order #...: LJJE91AC Matrix.....: WATER
LCS Lot-Sample#: D9H210000-054
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 11:55
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	50.0	41.0	ug/L	82	SW846 8270C
Acenaphthylene	50.0	41.7	ug/L	83	SW846 8270C
Acridine	50.0	45.8	ug/L	92	SW846 8270C
Anthracene	50.0	45.6	ug/L	91	SW846 8270C
Benzo(a)anthracene	50.0	45.7	ug/L	91	SW846 8270C
Benzo(b)fluoranthene	50.0	44.9	ug/L	90	SW846 8270C
Benzo(k)fluoranthene	50.0	43.1	ug/L	86	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	27.2	ug/L	54	SW846 8270C
Dibenz(a,h)acridine	50.0	46.7	ug/L	93	SW846 8270C
Dibenz(a,j)acridine	50.0	46.8	ug/L	94	SW846 8270C
2,3-Benzofuran	50.0	42.7	ug/L	85	SW846 8270C
Dibenzo(a,e)pyrene	50.0	28.0	ug/L	56	SW846 8270C
Benzo(ghi)perylene	50.0	47.9	ug/L	96	SW846 8270C
Dibenzo(a,i)pyrene	50.0	28.9	ug/L	58	SW846 8270C
Dibenzo(a,h)pyrene	50.0	21.6	ug/L	43	SW846 8270C
Dibenzo(a,l)pyrene	50.0	25.7	ug/L	51	SW846 8270C
Benzo(a)pyrene	50.0	45.0	ug/L	90	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	34.3	ug/L	69	SW846 8270C
2,6-Dimethylnaphthalene	50.0	38.9	ug/L	78	SW846 8270C
Benzo(e)pyrene	50.0	46.0	ug/L	92	SW846 8270C
3-Methylcholanthrene	50.0	40.0	ug/L	80	SW846 8270C
Benzo(b)thiophene	50.0	43.5	ug/L	87	SW846 8270C
6-Methylchrysene	50.0	27.2	ug/L	54	SW846 8270C
1-Methylphenanthrene	50.0	26.9	ug/L	54	SW846 8270C
Biphenyl	50.0	40.3	ug/L	81	SW846 8270C
Carbazole	50.0	46.9	ug/L	94	SW846 8270C
2,3,5-Trimethylnaphthalen	50.0	41.3	ug/L	83	SW846 8270C
Chrysene	50.0	46.4	ug/L	93	SW846 8270C
Dibenzo(a,h)anthracene	50.0	46.3	ug/L	93	SW846 8270C
Dibenzofuran	50.0	43.0	ug/L	86	SW846 8270C
Dibenzothiophene	50.0	44.3	ug/L	89	SW846 8270C
2,3-Dihydroindene	50.0	40.9	ug/L	82	SW846 8270C
Fluoranthene	50.0	45.1	ug/L	90	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJJE91AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H210000-054

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**50.0**	**42.1**	**ug/L**	**84**	**SW846 8270C**
Indene	**50.0**	**42.3**	**ug/L**	**85**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**50.0**	**47.0**	**ug/L**	**94**	**SW846 8270C**
Indole	**50.0**	**43.3**	**ug/L**	**87**	**SW846 8270C**
2-Methylnaphthalene	**50.0**	**41.0**	**ug/L**	**82**	**SW846 8270C**
1-Methylnaphthalene	**50.0**	**41.4**	**ug/L**	**83**	**SW846 8270C**
Naphthalene	**50.0**	**41.5**	**ug/L**	**83**	**SW846 8270C**
Perylene	**50.0**	**45.3**	**ug/L**	**91**	**SW846 8270C**
Phenanthrene	**50.0**	**45.3**	**ug/L**	**91**	**SW846 8270C**
Pyrene	**50.0**	**44.9**	**ug/L**	**90**	**SW846 8270C**
Quinoline	**50.0**	**45.9**	**ug/L**	**92**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	99	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	85	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 Work Order #...: LH7FX1AC-MS Matrix.....: WG
MS Lot-Sample #: D9H140241-004 LH7FX1AD-MSD
Date Sampled...: 08/13/09 Date Received..: 08/14/09
Prep Date.....: 08/18/09 Analysis Date..: 08/21/09
Prep Batch #...: 9230145 Analysis Time..: 12:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	78	(30 - 150)			SW846 8270C
	79	(30 - 150)	0.99	(0-30)	SW846 8270C
Acenaphthylene	75	(30 - 150)			SW846 8270C
	78	(30 - 150)	4.2	(0-30)	SW846 8270C
Acridine	84	(30 - 150)			SW846 8270C
	90	(30 - 150)	7.9	(0-30)	SW846 8270C
Anthracene	86	(30 - 150)			SW846 8270C
	92	(30 - 150)	7.2	(0-30)	SW846 8270C
Benzo(a)anthracene	79	(30 - 150)			SW846 8270C
	89	(30 - 150)	12	(0-30)	SW846 8270C
Benzo(b)fluoranthene	73	(30 - 150)			SW846 8270C
	79	(30 - 150)	9.0	(0-30)	SW846 8270C
Benzo(k)fluoranthene	77	(30 - 150)			SW846 8270C
	85	(30 - 150)	11	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	46	(30 - 150)			SW846 8270C
	50	(30 - 150)	11	(0-30)	SW846 8270C
Dibenz(a,h)acridine	85	(30 - 150)			SW846 8270C
	92	(30 - 150)	8.6	(0-30)	SW846 8270C
Dibenz(a,j)acridine	81	(30 - 150)			SW846 8270C
	90	(30 - 150)	11	(0-30)	SW846 8270C
2,3-Benzofuran	59	(30 - 150)			SW846 8270C
	51	(30 - 150)	14	(0-30)	SW846 8270C
Benzo(ghi)perylene	81	(30 - 150)			SW846 8270C
	89	(30 - 150)	11	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	47	(30 - 150)			SW846 8270C
	52	(30 - 150)	12	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	49	(30 - 150)			SW846 8270C
	54	(30 - 150)	9.5	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	43	(30 - 150)			SW846 8270C
	48	(30 - 150)	12	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	45	(30 - 150)			SW846 8270C
	50	(30 - 150)	11	(0-30)	SW846 8270C
Benzo(a)pyrene	79	(30 - 150)			SW846 8270C
	87	(30 - 150)	11	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	53	(30 - 150)			SW846 8270C
	63	(30 - 150)	18	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	73	(30 - 150)			SW846 8270C
	73	(30 - 150)	0.17	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LH7FX1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H140241-004 LH7FX1AD-MSD

PARAMETER	PERCENT RECOVERY		RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	80		(30 - 150)			SW846 8270C
	87		(30 - 150)	9.3	(0-30)	SW846 8270C
Benzo(b)thiophene	66		(30 - 150)			SW846 8270C
	59		(30 - 150)	9.4	(0-30)	SW846 8270C
3-Methylcholanthrene	76		(30 - 150)			SW846 8270C
	82		(30 - 150)	8.7	(0-30)	SW846 8270C
6-Methylchrysene	47		(30 - 150)			SW846 8270C
	51		(30 - 150)	9.1	(0-30)	SW846 8270C
1-Methylphenanthrene	50		(30 - 150)			SW846 8270C
	54		(30 - 150)	7.2	(0-30)	SW846 8270C
Biphenyl	74		(30 - 150)			SW846 8270C
	73		(30 - 150)	1.1	(0-30)	SW846 8270C
Carbazole	88		(30 - 150)			SW846 8270C
	94		(30 - 150)	6.5	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	81		(30 - 150)			SW846 8270C
	84		(30 - 150)	3.6	(0-30)	SW846 8270C
Chrysene	77		(43 - 124)			SW846 8270C
	84		(43 - 124)	9.7	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	78		(30 - 150)			SW846 8270C
	85		(30 - 150)	9.0	(0-30)	SW846 8270C
Dibenzofuran	83		(30 - 150)			SW846 8270C
	85		(30 - 150)	3.4	(0-30)	SW846 8270C
Dibenzothiophene	85		(30 - 150)			SW846 8270C
	89		(30 - 150)	6.2	(0-30)	SW846 8270C
2,3-Dihydroindene	57		(30 - 150)			SW846 8270C
	48		(30 - 150)	16	(0-30)	SW846 8270C
Fluoranthene	81		(30 - 150)			SW846 8270C
	88		(30 - 150)	9.1	(0-30)	SW846 8270C
Fluorene	82		(51 - 120)			SW846 8270C
	83		(51 - 120)	2.2	(0-30)	SW846 8270C
Indene	59		(49 - 108)			SW846 8270C
	51		(49 - 108)	14	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	80		(30 - 150)			SW846 8270C
	88		(30 - 150)	9.4	(0-30)	SW846 8270C
Indole	30		(30 - 150)			SW846 8270C
	20	a,p	(30 - 150)	39	(0-30)	SW846 8270C
2-Methylnaphthalene	70		(47 - 138)			SW846 8270C
	65		(47 - 138)	6.1	(0-30)	SW846 8270C
1-Methylnaphthalene	71		(30 - 150)			SW846 8270C
	67		(30 - 150)	5.2	(0-30)	SW846 8270C
Naphthalene	62		(43 - 128)			SW846 8270C
	56		(43 - 128)	9.7	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LH7FX1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H140241-004 LH7FX1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**78**	**(30 - 150)**			**SW846 8270C**
	85	**(30 - 150)**	**9.0**	**(0-30)**	**SW846 8270C**
Phenanthrene	**84**	**(30 - 150)**			**SW846 8270C**
	90	**(30 - 150)**	**6.6**	**(0-30)**	**SW846 8270C**
Pyrene	**81**	**(30 - 150)**			**SW846 8270C**
	88	**(30 - 150)**	**8.5**	**(0-30)**	**SW846 8270C**
Quinoline	**82**	**(40 - 126)**			**SW846 8270C**
	80	**(40 - 126)**	**0.98**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	66	(30 - 160)
	74	(30 - 160)
Fluorene d-10	81	(36 - 127)
	85	(36 - 127)
Naphthalene-d8	63	(37 - 107)
	58	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LH7FX1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H140241-004 LH7FX1AD-MSD
Date Sampled...: 08/13/09 **Date Received..:** 08/14/09
Prep Date.....: 08/18/09 **Analysis Date..:** 08/21/09
Prep Batch #...: 9230145 **Analysis Time..:** 12:14
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	47.3	37.0	ug/L	78		SW846 8270C
	ND	47.6	37.4	ug/L	79	0.99	SW846 8270C
Acenaphthylene	ND	47.3	35.4	ug/L	75		SW846 8270C
	ND	47.6	36.9	ug/L	78	4.2	SW846 8270C
Acridine	ND	47.3	39.7	ug/L	84		SW846 8270C
	ND	47.6	42.9	ug/L	90	7.9	SW846 8270C
Anthracene	ND	47.3	40.5	ug/L	86		SW846 8270C
	ND	47.6	43.6	ug/L	92	7.2	SW846 8270C
Benzo(a)anthracene	ND	47.3	37.4	ug/L	79		SW846 8270C
	ND	47.6	42.2	ug/L	89	12	SW846 8270C
Benzo(b)fluoranthene	ND	47.3	34.4	ug/L	73		SW846 8270C
	ND	47.6	37.6	ug/L	79	9.0	SW846 8270C
Benzo(k)fluoranthene	ND	47.3	36.2	ug/L	77		SW846 8270C
	ND	47.6	40.5	ug/L	85	11	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.3	21.5	ug/L	46		SW846 8270C
	ND	47.6	24.0	ug/L	50	11	SW846 8270C
Dibenz(a,h)acridine	ND	47.3	40.2	ug/L	85		SW846 8270C
	ND	47.6	43.8	ug/L	92	8.6	SW846 8270C
Dibenz(a,j)acridine	ND	47.3	38.3	ug/L	81		SW846 8270C
	ND	47.6	42.8	ug/L	90	11	SW846 8270C
2,3-Benzofuran	ND	47.3	27.9	ug/L	59		SW846 8270C
	ND	47.6	24.3	ug/L	51	14	SW846 8270C
Benzo(ghi)perylene	ND	47.3	38.1	ug/L	81		SW846 8270C
	ND	47.6	42.5	ug/L	89	11	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.3	22.0	ug/L	47		SW846 8270C
	ND	47.6	24.8	ug/L	52	12	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.3	23.3	ug/L	49		SW846 8270C
	ND	47.6	25.6	ug/L	54	9.5	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.3	20.1	ug/L	43		SW846 8270C
	ND	47.6	22.8	ug/L	48	12	SW846 8270C
Dibenzo(a,l)pyrene	ND	47.3	21.3	ug/L	45		SW846 8270C
	ND	47.6	23.8	ug/L	50	11	SW846 8270C
Benzo(a)pyrene	ND	47.3	37.3	ug/L	79		SW846 8270C
	ND	47.6	41.5	ug/L	87	11	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.3	25.2	ug/L	53		SW846 8270C
	ND	47.6	30.2	ug/L	63	18	SW846 8270C
2,6-Dimethylnaphthalene	ND	47.3	34.5	ug/L	73		SW846 8270C
	ND	47.6	34.5	ug/L	73	0.17	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LH7FX1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H140241-004 LH7FX1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.3	37.7	ug/L	80		SW846 8270C
	ND	47.6	41.3	ug/L	87	9.3	SW846 8270C
Benzo(b)thiophene	ND	47.3	31.0	ug/L	66		SW846 8270C
	ND	47.6	28.2	ug/L	59	9.4	SW846 8270C
3-Methylcholanthrene	ND	47.3	35.9	ug/L	76		SW846 8270C
	ND	47.6	39.2	ug/L	82	8.7	SW846 8270C
6-Methylchrysene	ND	47.3	22.3	ug/L	47		SW846 8270C
	ND	47.6	24.5	ug/L	51	9.1	SW846 8270C
1-Methylphenanthrene	ND	47.3	23.7	ug/L	50		SW846 8270C
	ND	47.6	25.5	ug/L	54	7.2	SW846 8270C
Biphenyl	ND	47.3	34.9	ug/L	74		SW846 8270C
	ND	47.6	34.5	ug/L	73	1.1	SW846 8270C
Carbazole	ND	47.3	41.7	ug/L	88		SW846 8270C
	ND	47.6	44.5	ug/L	94	6.5	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	47.3	38.4	ug/L	81		SW846 8270C
	ND	47.6	39.8	ug/L	84	3.6	SW846 8270C
Chrysene	ND	47.3	36.2	ug/L	77		SW846 8270C
	ND	47.6	39.9	ug/L	84	9.7	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.3	37.1	ug/L	78		SW846 8270C
	ND	47.6	40.6	ug/L	85	9.0	SW846 8270C
Dibenzofuran	ND	47.3	39.2	ug/L	83		SW846 8270C
	ND	47.6	40.6	ug/L	85	3.4	SW846 8270C
Dibenzothiophene	ND	47.3	40.0	ug/L	85		SW846 8270C
	ND	47.6	42.6	ug/L	89	6.2	SW846 8270C
2,3-Dihydroindene	ND	47.3	26.9	ug/L	57		SW846 8270C
	ND	47.6	23.0	ug/L	48	16	SW846 8270C
Fluoranthene	ND	47.3	38.3	ug/L	81		SW846 8270C
	ND	47.6	42.0	ug/L	88	9.1	SW846 8270C
Fluorene	ND	47.3	38.8	ug/L	82		SW846 8270C
	ND	47.6	39.7	ug/L	83	2.2	SW846 8270C
Indene	ND	47.3	27.7	ug/L	59		SW846 8270C
	ND	47.6	24.2	ug/L	51	14	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.3	38.1	ug/L	80		SW846 8270C
	ND	47.6	41.8	ug/L	88	9.4	SW846 8270C
Indole	ND	47.3	14.4	ug/L	30		SW846 8270C
	ND	47.6	9.66	ug/L	20 a,p	39	SW846 8270C
2-Methylnaphthalene	ND	47.3	32.9	ug/L	70		SW846 8270C
	ND	47.6	31.0	ug/L	65	6.1	SW846 8270C
1-Methylnaphthalene	ND	47.3	33.4	ug/L	71		SW846 8270C
	ND	47.6	31.7	ug/L	67	5.2	SW846 8270C
Naphthalene	ND	47.3	29.5	ug/L	62		SW846 8270C
	ND	47.6	26.8	ug/L	56	9.7	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LH7FX1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H140241-004 LH7FX1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**47.3**	**37.0**	**ug/L**	**78**		**SW846 8270C**
	ND	**47.6**	**40.5**	**ug/L**	**85**	**9.0**	**SW846 8270C**
Phenanthrene	**ND**	**47.3**	**40.0**	**ug/L**	**84**		**SW846 8270C**
	ND	**47.6**	**42.7**	**ug/L**	**90**	**6.6**	**SW846 8270C**
Pyrene	**ND**	**47.3**	**38.4**	**ug/L**	**81**		**SW846 8270C**
	ND	**47.6**	**41.8**	**ug/L**	**88**	**8.5**	**SW846 8270C**
Quinoline	**ND**	**47.3**	**38.7**	**ug/L**	**82**		**SW846 8270C**
	ND	**47.6**	**38.3**	**ug/L**	**80**	**0.98**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	66	(30 - 160)
	74	(30 - 160)
Fluorene d-10	81	(36 - 127)
	85	(36 - 127)
Naphthalene-d8	63	(37 - 107)
	58	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 Work Order #...: LJEFD1AC-MS Matrix.....: WATER
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD
Date Sampled...: 08/18/09 Date Received..: 08/19/09
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 14:53
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	90	(30 - 150)			SW846 8270C
	88	(30 - 150)	0.83	(0-30)	SW846 8270C
Acenaphthylene	89	(30 - 150)			SW846 8270C
	89	(30 - 150)	0.28	(0-30)	SW846 8270C
Acridine	95	(30 - 150)			SW846 8270C
	93	(30 - 150)	1.7	(0-30)	SW846 8270C
Anthracene	100	(30 - 150)			SW846 8270C
	98	(30 - 150)	1.1	(0-30)	SW846 8270C
Benzo(a)anthracene	92	(30 - 150)			SW846 8270C
	95	(30 - 150)	3.9	(0-30)	SW846 8270C
Benzo(b)fluoranthene	93	(30 - 150)			SW846 8270C
	90	(30 - 150)	2.9	(0-30)	SW846 8270C
Benzo(k)fluoranthene	87	(30 - 150)			SW846 8270C
	87	(30 - 150)	0.41	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	58	(30 - 150)			SW846 8270C
	57	(30 - 150)	2.4	(0-30)	SW846 8270C
Dibenz(a,h)acridine	99	(30 - 150)			SW846 8270C
	97	(30 - 150)	2.2	(0-30)	SW846 8270C
Dibenz(a,j)acridine	100	(30 - 150)			SW846 8270C
	98	(30 - 150)	1.0	(0-30)	SW846 8270C
2,3-Benzofuran	72	(30 - 150)			SW846 8270C
	73	(30 - 150)	2.0	(0-30)	SW846 8270C
Benzo(ghi)perylene	102	(30 - 150)			SW846 8270C
	97	(30 - 150)	4.5	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	58	(30 - 150)			SW846 8270C
	58	(30 - 150)	1.6	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	60	(30 - 150)			SW846 8270C
	62	(30 - 150)	4.2	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	55	(30 - 150)			SW846 8270C
	55	(30 - 150)	0.96	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	57	(30 - 150)			SW846 8270C
	56	(30 - 150)	2.0	(0-30)	SW846 8270C
Benzo(a)pyrene	95	(30 - 150)			SW846 8270C
	92	(30 - 150)	1.7	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	83	(30 - 150)			SW846 8270C
	80	(30 - 150)	2.7	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	86	(30 - 150)			SW846 8270C
	86	(30 - 150)	0.73	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	97	(30 - 150)			SW846 8270C
	93	(30 - 150)	3.1	(0-30)	SW846 8270C
Benzo(b)thiophene	78	(30 - 150)			SW846 8270C
	78	(30 - 150)	0.24	(0-30)	SW846 8270C
3-Methylcholanthrene	93	(30 - 150)			SW846 8270C
	90	(30 - 150)	2.7	(0-30)	SW846 8270C
6-Methylchrysene	56	(30 - 150)			SW846 8270C
	56	(30 - 150)	0.91	(0-30)	SW846 8270C
1-Methylphenanthrene	59	(30 - 150)			SW846 8270C
	57	(30 - 150)	3.3	(0-30)	SW846 8270C
Biphenyl	85	(30 - 150)			SW846 8270C
	86	(30 - 150)	1.1	(0-30)	SW846 8270C
Carbazole	98	(30 - 150)			SW846 8270C
	95	(30 - 150)	2.6	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	91	(30 - 150)			SW846 8270C
	93	(30 - 150)	3.0	(0-30)	SW846 8270C
Chrysene	88	(43 - 124)			SW846 8270C
	91	(43 - 124)	4.0	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	98	(30 - 150)			SW846 8270C
	93	(30 - 150)	4.9	(0-30)	SW846 8270C
Dibenzofuran	96	(30 - 150)			SW846 8270C
	95	(30 - 150)	0.92	(0-30)	SW846 8270C
Dibenzothiophene	96	(30 - 150)			SW846 8270C
	94	(30 - 150)	1.0	(0-30)	SW846 8270C
2,3-Dihydroindene	66	(30 - 150)			SW846 8270C
	65	(30 - 150)	0.48	(0-30)	SW846 8270C
Fluoranthene	98	(30 - 150)			SW846 8270C
	92	(30 - 150)	5.1	(0-30)	SW846 8270C
Fluorene	92	(51 - 120)			SW846 8270C
	93	(51 - 120)	2.4	(0-30)	SW846 8270C
Indene	69	(49 - 108)			SW846 8270C
	69	(49 - 108)	0.33	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	101	(30 - 150)			SW846 8270C
	95	(30 - 150)	5.6	(0-30)	SW846 8270C
Indole	25 a	(30 - 150)			SW846 8270C
	22 a	(30 - 150)	9.7	(0-30)	SW846 8270C
2-Methylnaphthalene	81	(47 - 138)			SW846 8270C
	81	(47 - 138)	1.0	(0-30)	SW846 8270C
1-Methylnaphthalene	83	(30 - 150)			SW846 8270C
	82	(30 - 150)	0.28	(0-30)	SW846 8270C
Naphthalene	74	(43 - 128)			SW846 8270C
	72	(43 - 128)	1.5	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**95**	**(30 - 150)**			**SW846 8270C**
	92	**(30 - 150)**	**2.7**	**(0-30)**	**SW846 8270C**
Phenanthrene	**97**	**(30 - 150)**			**SW846 8270C**
	96	**(30 - 150)**	**0.83**	**(0-30)**	**SW846 8270C**
Pyrene	**97**	**(30 - 150)**			**SW846 8270C**
	91	**(30 - 150)**	**5.3**	**(0-30)**	**SW846 8270C**
Quinoline	**93**	**(40 - 126)**			**SW846 8270C**
	96	**(40 - 126)**	**3.1**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(30 - 160)
	89	(30 - 160)
Fluorene d-10	92	(36 - 127)
	94	(36 - 127)
Naphthalene-d8	82	(37 - 107)
	84	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 Work Order #...: LJEFD1AC-MS Matrix.....: WATER
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD
Date Sampled...: 08/18/09 Date Received..: 08/19/09
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 14:53
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	47.2	42.3	ug/L	90		SW846 8270C
	ND	47.5	42.0	ug/L	88	0.83	SW846 8270C
Acenaphthylene	ND	47.2	42.2	ug/L	89		SW846 8270C
	ND	47.5	42.1	ug/L	89	0.28	SW846 8270C
Acridine	ND	47.2	45.0	ug/L	95		SW846 8270C
	ND	47.5	44.2	ug/L	93	1.7	SW846 8270C
Anthracene	ND	47.2	47.0	ug/L	100		SW846 8270C
	ND	47.5	46.5	ug/L	98	1.1	SW846 8270C
Benzo(a)anthracene	ND	47.2	43.2	ug/L	92		SW846 8270C
	ND	47.5	45.0	ug/L	95	3.9	SW846 8270C
Benzo(b)fluoranthene	ND	47.2	44.0	ug/L	93		SW846 8270C
	ND	47.5	42.7	ug/L	90	2.9	SW846 8270C
Benzo(k)fluoranthene	ND	47.2	41.1	ug/L	87		SW846 8270C
	ND	47.5	41.3	ug/L	87	0.41	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.2	27.6	ug/L	58		SW846 8270C
	ND	47.5	26.9	ug/L	57	2.4	SW846 8270C
Dibenz(a,h)acridine	ND	47.2	46.9	ug/L	99		SW846 8270C
	ND	47.5	45.9	ug/L	97	2.2	SW846 8270C
Dibenz(a,j)acridine	ND	47.2	47.1	ug/L	100		SW846 8270C
	ND	47.5	46.6	ug/L	98	1.0	SW846 8270C
2,3-Benzofuran	ND	47.2	33.9	ug/L	72		SW846 8270C
	ND	47.5	34.6	ug/L	73	2.0	SW846 8270C
Benzo(ghi)perylene	ND	47.2	48.0	ug/L	102		SW846 8270C
	ND	47.5	45.9	ug/L	97	4.5	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.2	27.4	ug/L	58		SW846 8270C
	ND	47.5	27.8	ug/L	58	1.6	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.2	28.3	ug/L	60		SW846 8270C
	ND	47.5	29.5	ug/L	62	4.2	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.2	26.2	ug/L	55		SW846 8270C
	ND	47.5	25.9	ug/L	55	0.96	SW846 8270C
Dibenzo(a,l)pyrene	ND	47.2	27.0	ug/L	57		SW846 8270C
	ND	47.5	26.5	ug/L	56	2.0	SW846 8270C
Benzo(a)pyrene	ND	47.2	44.7	ug/L	95		SW846 8270C
	ND	47.5	43.9	ug/L	92	1.7	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.2	39.2	ug/L	83		SW846 8270C
	ND	47.5	38.1	ug/L	80	2.7	SW846 8270C
2,6-Dimethylnaphthalene	ND	47.2	40.6	ug/L	86		SW846 8270C
	ND	47.5	40.9	ug/L	86	0.73	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.2	45.6	ug/L	97		SW846 8270C
	ND	47.5	44.2	ug/L	93	3.1	SW846 8270C
Benzo(b)thiophene	ND	47.2	37.0	ug/L	78		SW846 8270C
	ND	47.5	36.9	ug/L	78	0.24	SW846 8270C
3-Methylcholanthrene	ND	47.2	43.8	ug/L	93		SW846 8270C
	ND	47.5	42.7	ug/L	90	2.7	SW846 8270C
6-Methylchrysene	ND	47.2	26.2	ug/L	56		SW846 8270C
	ND	47.5	26.5	ug/L	56	0.91	SW846 8270C
1-Methylphenanthrene	ND	47.2	27.8	ug/L	59		SW846 8270C
	ND	47.5	26.9	ug/L	57	3.3	SW846 8270C
Biphenyl	ND	47.2	40.2	ug/L	85		SW846 8270C
	ND	47.5	40.6	ug/L	86	1.1	SW846 8270C
Carbazole	ND	47.2	46.3	ug/L	98		SW846 8270C
	ND	47.5	45.1	ug/L	95	2.6	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	47.2	43.0	ug/L	91		SW846 8270C
	ND	47.5	44.3	ug/L	93	3.0	SW846 8270C
Chrysene	ND	47.2	41.8	ug/L	88		SW846 8270C
	ND	47.5	43.5	ug/L	91	4.0	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.2	46.4	ug/L	98		SW846 8270C
	ND	47.5	44.2	ug/L	93	4.9	SW846 8270C
Dibenzofuran	ND	47.2	45.5	ug/L	96		SW846 8270C
	ND	47.5	45.1	ug/L	95	0.92	SW846 8270C
Dibenzothiophene	ND	47.2	45.2	ug/L	96		SW846 8270C
	ND	47.5	44.7	ug/L	94	1.0	SW846 8270C
2,3-Dihydroindene	ND	47.2	30.9	ug/L	66		SW846 8270C
	ND	47.5	31.1	ug/L	65	0.48	SW846 8270C
Fluoranthene	ND	47.2	46.2	ug/L	98		SW846 8270C
	ND	47.5	43.9	ug/L	92	5.1	SW846 8270C
Fluorene	ND	47.2	43.3	ug/L	92		SW846 8270C
	ND	47.5	44.3	ug/L	93	2.4	SW846 8270C
Indene	ND	47.2	32.6	ug/L	69		SW846 8270C
	ND	47.5	32.7	ug/L	69	0.33	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.2	47.6	ug/L	101		SW846 8270C
	ND	47.5	45.0	ug/L	95	5.6	SW846 8270C
Indole	ND	47.2	11.7	ug/L	25 a		SW846 8270C
	ND	47.5	10.6	ug/L	22 a	9.7	SW846 8270C
2-Methylnaphthalene	ND	47.2	38.1	ug/L	81		SW846 8270C
	ND	47.5	38.5	ug/L	81	1.0	SW846 8270C
1-Methylnaphthalene	ND	47.2	39.1	ug/L	83		SW846 8270C
	ND	47.5	39.0	ug/L	82	0.28	SW846 8270C
Naphthalene	ND	47.2	34.9	ug/L	74		SW846 8270C
	ND	47.5	34.4	ug/L	72	1.5	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H140241 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**47.2**	**44.7**	**ug/L**	**95**		**SW846 8270C**
	ND	**47.5**	**43.5**	**ug/L**	**92**	**2.7**	**SW846 8270C**
Phenanthrene	**ND**	**47.2**	**45.9**	**ug/L**	**97**		**SW846 8270C**
	ND	**47.5**	**45.5**	**ug/L**	**96**	**0.83**	**SW846 8270C**
Pyrene	**ND**	**47.2**	**45.8**	**ug/L**	**97**		**SW846 8270C**
	ND	**47.5**	**43.4**	**ug/L**	**91**	**5.3**	**SW846 8270C**
Quinoline	**ND**	**47.2**	**44.0**	**ug/L**	**93**		**SW846 8270C**
	ND	**47.5**	**45.4**	**ug/L**	**96**	**3.1**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(30 - 160)
	89	(30 - 160)
Fluorene d-10	92	(36 - 127)
	94	(36 - 127)
Naphthalene-d8	82	(37 - 107)
	84	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

Sampler ID 5.1°C / 4.3°C

Temperature on Receipt 5.2°C ~~XC~~ 8/14/09

Drinking Water? Yes ☐ No ☐ IR1

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508) City of

Client	Project Manager	Date	Chain of Custody Number
St. Louis Park	Scott Anderson	8/13/09	115117
Address 3752 Wooddale Ave.	**Telephone Number (Area Code)/Fax Number** 952-924-2558	**Lab Number**	**Page** 1 of 2
City St. Louis Park / **State** MN / **Zip Code** 55416	**Site Contact**	**Lab Contact** Lisa U	
Project Name and Location (State) Reilly / MN	**Carrier/Waybill Number**		
Contract/Purchase Order/Quote No. 01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPB	Special Instructions/ Conditions of Receipt
W120-081309	8/13/09	1330		X			2						X	
P312-081309		1300												
W422-081309		1145												
W428-081309		0900												
W428D-081309		0905												
W428MS-081309		0910												
W428MSD-081309		0915												
W428FB-081309		0920												
W428FBD-081309		0925												
W426-081309		1030												
W421-081309		1110												
W136-081309		1520												

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/13/09	1700	1. Received By	8/14/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

[redacted]

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/13/09	115110
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 2 of 2
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH+PCB	Special Instructions/ Conditions of Receipt
W131-081309	8/13/09	1500		X			2						X	
W431-081309	↓	1400		↓			↓						↓	
W128-081309	↓	1445		↓			↓						↓	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/13/09	1700	1. Received By	8/14/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

AECOM Environment
FNBB 332 Minnesota Street Suite E1000 St. Paul, MN 55101
T 651.222.0841 F 651.222.8914 www.aecom.com

Memorandum

Date: March 8, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPB PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9H140241
Appendix K

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of 11 aqueous samples and two field blanks for part per billion (ppb) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C. The samples were collected on August 13, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9H140241.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W120-081309	W422-081309
W428-081309	P312-081309
W428D-081309	W428FB-081309
W428FBD-081309	W426-081309
W421-081309	W136-081309
W131-081309	W431-081309

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Sample IDs	Sample IDs
W128-081309	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times. Sample P312-081309 was extracted one day removed from the recommended holding time. This was because the original sample was destroyed during a laboratory error. Extra sample volume was used to re-extract and analyze this sampling point.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blanks 9230145, 9233054, and field blanks W428FB-081309/W428FBD-081309.

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses. The surrogate percent recovery limits were incorrectly listed in this data package. Since all samples were within range, no action was taken.

AECOM

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MS/MSD Results

MS/MSD analyses were performed on sample W428-081309. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
Indole (MSD)	20	39	30-150	0-25	J	UJ
Associated sample: All samples in data package except for P312						
Compound	**MS/MSD**		**QC Limits**		**Actions**	
	%R	**RPD**	**%R**	**RPD**	**Detects**	**Nondetects**
Indole (MS)	25		30-150		J	UJ
Indole (MSD)	22		30-150		J	UJ
Associated sample: P312-081309						

LCS Results

All % recoveries for both LCS samples analyzed with this data package were within the control limits outlined in the QAPP.

Field Duplicate Results

Samples W428-081309 and W428D-081309 were the field duplicate pairs analyzed with this data set.

A total of 0 of 31 compounds were detected.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W421-081109 was initially analyzed undiluted. The results of some compounds fell outside the calibration range. The sample was then diluted at 4x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within $\pm$ 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this $\pm$ 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9H190204

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

August 26, 2009

CASE NARRATIVE
D9H190204

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Eleven samples plus one set of MS/MSD samples were received under chain of custody on August 19, 2009. The samples were received at temperatures of 3.7°C, 4.2°C and 2.7°C. All sample containers were received in acceptable condition, with the exception of the item noted below.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

Sample W437-081809 was analyzed at two different dilutions to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analysis performed at a dilution, because the extract was diluted beyond the ability to quantitate recoveries.

The MS/MSD associated with QC batch 9233054 was performed using sample W433-081809, as requested. The MS/MSD exhibited percent recoveries outside the control limits for Indole. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

No other anomalies were noted.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9H190204
ANALYSIS: SW846-8270C

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	62
MS	7	7
MS Surrogates	3	3
MSD	7	7
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	33	33
Samples and QC Internal Standard Area	39	39
TOTAL	**236**	**236**
% Completeness	**100.0%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9H190204					
Sample: W433-081809		DUP: W433D-081809			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	ND	Acenaphthene	ND	0.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	ND	2,3-Dihydroindene	ND	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	ND	Naphthalene	ND	0.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND. Considered acceptable if the positive

EXECUTIVE SUMMARY - Detection Highlights

D9H190204

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W437-081809 08/18/09 15:40 002				
Acenaphthene	140	10	ug/L	SW846 8270C
Acridine	13	10	ug/L	SW846 8270C
Benzo(b)thiophene	41	10	ug/L	SW846 8270C
Biphenyl	30	10	ug/L	SW846 8270C
Carbazole	100	10	ug/L	SW846 8270C
Dibenzofuran	51	10	ug/L	SW846 8270C
2,3-Dihydroindene	72	10	ug/L	SW846 8270C
Fluorene	49	10	ug/L	SW846 8270C
Indene	7.7 J	10	ug/L	SW846 8270C
2-Methylnaphthalene	170 J	200	ug/L	SW846 8270C
1-Methylnaphthalene	190 J	200	ug/L	SW846 8270C
Naphthalene	2000	200	ug/L	SW846 8270C
Phenanthrene	4.0 J	10	ug/L	SW846 8270C
W27-081809 08/18/09 13:30 007				
Acenaphthene	44	10	ug/L	SW846 8270C
Carbazole	2.1 J	10	ug/L	SW846 8270C
Dibenzofuran	7.7 J	10	ug/L	SW846 8270C
Dibenzothiophene	1.5 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	37	10	ug/L	SW846 8270C
Fluorene	21	10	ug/L	SW846 8270C
Indene	3.7 J	10	ug/L	SW846 8270C
1-Methylnaphthalene	3.7 J	10	ug/L	SW846 8270C
W101-081809 08/18/09 12:05 009				
2,3-Dihydroindene	9.7 J	10	ug/L	SW846 8270C
W409-081809 08/18/09 10:30 010				
Acenaphthene	6.4 J	10	ug/L	SW846 8270C
Carbazole	2.2 J	10	ug/L	SW846 8270C
2,3-Dihydroindene	4.7 J	10	ug/L	SW846 8270C
Fluorene	3.6 J	10	ug/L	SW846 8270C
Indene	1.4 J	10	ug/L	SW846 8270C
1-Methylnaphthalene	5.9 J	10	ug/L	SW846 8270C
Phenanthrene	4.8 J	10	ug/L	SW846 8270C

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9H190204

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W143-081809 08/18/09 14:50 011				
Naphthalene	8.3 J	10	ug/L	SW846 8270C

METHODS SUMMARY

D9H190204

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9H190204

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Ashley Wolfe	004211

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9H190204

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LJEE5	001	W438-081809	08/18/09	15:30
LJEFA	002	W437-081809	08/18/09	15:40
LJEFD	003	W433-081809	08/18/09	09:30
LJEFH	004	W433D-081809	08/18/09	09:35
LJEFK	005	W433FB-081809	08/18/09	09:20
LJEFM	006	W433FBD-081809	08/18/09	09:25
LJEFP	007	W27-081809	08/18/09	13:30
LJEFR	008	W20-081809	08/18/09	14:15
LJEFV	009	W101-081809	08/18/09	12:05
LJEF0	010	W409-081809	08/18/09	10:30
LJEF3	011	W143-081809	08/18/09	14:50

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W438-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-001 **Work Order #...:** LJEE51AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 13:06
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	88	(30 - 160)
Fluorene d-10	91	(36 - 127)
Naphthalene-d8	71	(37 - 107)

City of Saint Louis Park

Client Sample ID: W437-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-002	**Work Order #...:** LJEFA1AA	**Matrix.....:** WG	
Date Sampled...: 08/18/09	**Date Received..:** 08/19/09		
Prep Date.....: 08/21/09	**Analysis Date..:** 08/25/09		
Prep Batch #...: 9233054	**Analysis Time..:** 13:42		
Dilution Factor: 1			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**140**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	**13**	**10**	**ug/L**
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**41**	**10**	**ug/L**
Biphenyl	**30**	**10**	**ug/L**
Carbazole	**100**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**51**	**10**	**ug/L**
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**72**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**49**	**10**	**ug/L**
Indene	**7.7 J**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	**4.0 J**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	78	(30 - 160)
Fluorene d-10	92	(36 - 127)
Naphthalene-d8	85	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W437-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-002	**Work Order #...:** LJEFA2AA	**Matrix.....:** WG	
Date Sampled...: 08/18/09	**Date Received..:** 08/19/09		
Prep Date.....: 08/21/09	**Analysis Date..:** 08/26/09		
Prep Batch #...: 9233054	**Analysis Time..:** 08:39		
Dilution Factor: 20			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	**170 J**	**200**	**ug/L**
1-Methylnaphthalene	**190 J**	**200**	**ug/L**
Naphthalene	**2000**	**200**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W433-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-003 **Work Order #...:** LJEFD1AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 14:17
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	58	(30 - 160)
Fluorene d-10	86	(36 - 127)
Naphthalene-d8	84	(37 - 107)

City of Saint Louis Park

Client Sample ID: W433D-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-004 **Work Order #...:** LJEFH1AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 16:03
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	92	(30 - 160)
Fluorene d-10	90	(36 - 127)
Naphthalene-d8	82	(37 - 107)

City of Saint Louis Park

Client Sample ID: W433FB-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-005 **Work Order #...:** LJEFK1AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 16:38
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	96	(30 - 160)
Fluorene d-10	87	(36 - 127)
Naphthalene-d8	86	(37 - 107)

City of Saint Louis Park

Client Sample ID: W433FBD-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-006 **Work Order #...:** LJEFM1AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 17:14
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	101	(30 - 160)
Fluorene d-10	89	(36 - 127)
Naphthalene-d8	88	(37 - 107)

City of Saint Louis Park

Client Sample ID: W27-081809

GC/MS Semivolatiles

Lot-Sample #...:	D9H190204-007	**Work Order #...:**	LJEFP1AA	**Matrix.....:**	WG
Date Sampled...:	08/18/09	**Date Received..:**	08/19/09		
Prep Date.....:	08/21/09	**Analysis Date..:**	08/25/09		
Prep Batch #...:	9233054	**Analysis Time..:**	17:49		
Dilution Factor:	1				
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**44**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**2.1 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**7.7 J**	**10**	**ug/L**
Dibenzothiophene	**1.5 J**	**10**	**ug/L**
2,3-Dihydroindene	**37**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**21**	**10**	**ug/L**
Indene	**3.7 J**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**3.7 J**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	89	(30 - 160)
Fluorene d-10	84	(36 - 127)
Naphthalene-d8	79	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W20-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-008 **Work Order #...:** LJEFR1AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 18:24
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	93	(30 - 160)
Fluorene d-10	91	(36 - 127)
Naphthalene-d8	73	(37 - 107)

City of Saint Louis Park

Client Sample ID: W101-081809

GC/MS Semivolatiles

Lot-Sample #...:	D9H190204-009	**Work Order #...:**	LJEFV1AA	**Matrix.....:**	WG
Date Sampled...:	08/18/09	**Date Received..:**	08/19/09		
Prep Date.....:	08/21/09	**Analysis Date..:**	08/25/09		
Prep Batch #...:	9233054	**Analysis Time..:**	19:00		
Dilution Factor:	1				
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**9.7 J**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(30 - 160)
Fluorene d-10	82	(36 - 127)
Naphthalene-d8	66	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W409-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-010 **Work Order #...:** LJEF01AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 19:35
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**6.4 J**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	**2.2 J**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	**4.7 J**	**10**	**ug/L**
Fluoranthene	ND	10	ug/L
Fluorene	**3.6 J**	**10**	**ug/L**
Indene	**1.4 J**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	**5.9 J**	**10**	**ug/L**
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	**4.8 J**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	61	(30 - 160)
Fluorene d-10	84	(36 - 127)
Naphthalene-d8	64	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W143-081809

GC/MS Semivolatiles

Lot-Sample #...: D9H190204-011 **Work Order #...:** LJEF31AA **Matrix.....:** WG
Date Sampled...: 08/18/09 **Date Received..:** 08/19/09
Prep Date.....: 08/21/09 **Analysis Date..:** 08/25/09
Prep Batch #...: 9233054 **Analysis Time..:** 20:10
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	**8.3 J**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	79	(30 - 160)
Fluorene d-10	94	(36 - 127)
Naphthalene-d8	89	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9H190204

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C		9233054	9233030
002	WG	SW846 8270C		9233054	9233030
003	WG	SW846 8270C		9233054	9233030
004	WG	SW846 8270C		9233054	9233030
005	WG	SW846 8270C		9233054	9233030
006	WG	SW846 8270C		9233054	9233030
007	WG	SW846 8270C		9233054	9233030
008	WG	SW846 8270C		9233054	9233030
009	WG	SW846 8270C		9233054	9233030
010	WG	SW846 8270C		9233054	9233030
011	WG	SW846 8270C		9233054	9233030

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 **Work Order #...:** LJJE91AA **Matrix.....:** WATER
MB Lot-Sample #: D9H210000-054

Prep Date.....: 08/21/09 **Analysis Time..:** 11:20
Analysis Date..: 08/25/09 **Prep Batch #...:** 9233054
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	97	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	85	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 Work Order #...: LJJE91AC Matrix.....: WATER
LCS Lot-Sample#: D9H210000-054
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 11:55
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	82	(30 - 150)	SW846 8270C
Acenaphthylene	83	(30 - 150)	SW846 8270C
Acridine	92	(30 - 150)	SW846 8270C
Anthracene	91	(30 - 150)	SW846 8270C
Benzo(a)anthracene	91	(30 - 150)	SW846 8270C
Benzo(b)fluoranthene	90	(30 - 150)	SW846 8270C
Benzo(k)fluoranthene	86	(30 - 150)	SW846 8270C
7H-Dibenzo[c,g]carbazole	54	(30 - 150)	SW846 8270C
Dibenz(a,h)acridine	93	(30 - 150)	SW846 8270C
Dibenz(a,j)acridine	94	(30 - 150)	SW846 8270C
2,3-Benzofuran	85	(30 - 150)	SW846 8270C
Dibenzo(a,e)pyrene	56	(30 - 150)	SW846 8270C
Benzo(ghi)perylene	96	(30 - 150)	SW846 8270C
Dibenzo(a,i)pyrene	58	(30 - 150)	SW846 8270C
Dibenzo(a,h)pyrene	43	(30 - 150)	SW846 8270C
Dibenzo(a,l)pyrene	51	(30 - 150)	SW846 8270C
Benzo(a)pyrene	90	(30 - 150)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	69	(30 - 150)	SW846 8270C
2,6-Dimethylnaphthalene	78	(30 - 150)	SW846 8270C
Benzo(e)pyrene	92	(30 - 150)	SW846 8270C
3-Methylcholanthrene	80	(30 - 150)	SW846 8270C
Benzo(b)thiophene	87	(30 - 150)	SW846 8270C
6-Methylchrysene	54	(30 - 150)	SW846 8270C
1-Methylphenanthrene	54	(30 - 150)	SW846 8270C
Biphenyl	81	(30 - 150)	SW846 8270C
Carbazole	94	(30 - 150)	SW846 8270C
2,3,5-Trimethylnaphthalen	83	(30 - 150)	SW846 8270C
Chrysene	93	(43 - 124)	SW846 8270C
Dibenzo(a,h)anthracene	93	(30 - 150)	SW846 8270C
Dibenzofuran	86	(30 - 150)	SW846 8270C
Dibenzothiophene	89	(30 - 150)	SW846 8270C
2,3-Dihydroindene	82	(30 - 150)	SW846 8270C
Fluoranthene	90	(30 - 150)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 **Work Order #...:** LJJE91AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H210000-054

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**84**	**(51 - 120)**	**SW846 8270C**
Indene	**85**	**(49 - 108)**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**94**	**(30 - 150)**	**SW846 8270C**
Indole	**87**	**(30 - 150)**	**SW846 8270C**
2-Methylnaphthalene	**82**	**(47 - 138)**	**SW846 8270C**
1-Methylnaphthalene	**83**	**(30 - 150)**	**SW846 8270C**
Naphthalene	**83**	**(43 - 128)**	**SW846 8270C**
Perylene	**91**	**(30 - 150)**	**SW846 8270C**
Phenanthrene	**91**	**(30 - 150)**	**SW846 8270C**
Pyrene	**90**	**(30 - 150)**	**SW846 8270C**
Quinoline	**92**	**(40 - 126)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	99	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	85	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 Work Order #...: LJJE91AC Matrix.....: WATER
LCS Lot-Sample#: D9H210000-054
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 11:55
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	50.0	41.0	ug/L	82	SW846 8270C
Acenaphthylene	50.0	41.7	ug/L	83	SW846 8270C
Acridine	50.0	45.8	ug/L	92	SW846 8270C
Anthracene	50.0	45.6	ug/L	91	SW846 8270C
Benzo(a)anthracene	50.0	45.7	ug/L	91	SW846 8270C
Benzo(b)fluoranthene	50.0	44.9	ug/L	90	SW846 8270C
Benzo(k)fluoranthene	50.0	43.1	ug/L	86	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	27.2	ug/L	54	SW846 8270C
Dibenz(a,h)acridine	50.0	46.7	ug/L	93	SW846 8270C
Dibenz(a,j)acridine	50.0	46.8	ug/L	94	SW846 8270C
2,3-Benzofuran	50.0	42.7	ug/L	85	SW846 8270C
Dibenzo(a,e)pyrene	50.0	28.0	ug/L	56	SW846 8270C
Benzo(ghi)perylene	50.0	47.9	ug/L	96	SW846 8270C
Dibenzo(a,i)pyrene	50.0	28.9	ug/L	58	SW846 8270C
Dibenzo(a,h)pyrene	50.0	21.6	ug/L	43	SW846 8270C
Dibenzo(a,l)pyrene	50.0	25.7	ug/L	51	SW846 8270C
Benzo(a)pyrene	50.0	45.0	ug/L	90	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	34.3	ug/L	69	SW846 8270C
2,6-Dimethylnaphthalene	50.0	38.9	ug/L	78	SW846 8270C
Benzo(e)pyrene	50.0	46.0	ug/L	92	SW846 8270C
3-Methylcholanthrene	50.0	40.0	ug/L	80	SW846 8270C
Benzo(b)thiophene	50.0	43.5	ug/L	87	SW846 8270C
6-Methylchrysene	50.0	27.2	ug/L	54	SW846 8270C
1-Methylphenanthrene	50.0	26.9	ug/L	54	SW846 8270C
Biphenyl	50.0	40.3	ug/L	81	SW846 8270C
Carbazole	50.0	46.9	ug/L	94	SW846 8270C
2,3,5-Trimethylnaphthalen	50.0	41.3	ug/L	83	SW846 8270C
Chrysene	50.0	46.4	ug/L	93	SW846 8270C
Dibenzo(a,h)anthracene	50.0	46.3	ug/L	93	SW846 8270C
Dibenzofuran	50.0	43.0	ug/L	86	SW846 8270C
Dibenzothiophene	50.0	44.3	ug/L	89	SW846 8270C
2,3-Dihydroindene	50.0	40.9	ug/L	82	SW846 8270C
Fluoranthene	50.0	45.1	ug/L	90	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 **Work Order #...:** LJJE91AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H210000-054

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	**50.0**	**42.1**	**ug/L**	**84**	**SW846 8270C**
Indene	**50.0**	**42.3**	**ug/L**	**85**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**50.0**	**47.0**	**ug/L**	**94**	**SW846 8270C**
Indole	**50.0**	**43.3**	**ug/L**	**87**	**SW846 8270C**
2-Methylnaphthalene	**50.0**	**41.0**	**ug/L**	**82**	**SW846 8270C**
1-Methylnaphthalene	**50.0**	**41.4**	**ug/L**	**83**	**SW846 8270C**
Naphthalene	**50.0**	**41.5**	**ug/L**	**83**	**SW846 8270C**
Perylene	**50.0**	**45.3**	**ug/L**	**91**	**SW846 8270C**
Phenanthrene	**50.0**	**45.3**	**ug/L**	**91**	**SW846 8270C**
Pyrene	**50.0**	**44.9**	**ug/L**	**90**	**SW846 8270C**
Quinoline	**50.0**	**45.9**	**ug/L**	**92**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	99	(30 - 160)
Fluorene d-10	88	(36 - 127)
Naphthalene-d8	85	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 Work Order #...: LJEFD1AC-MS Matrix.....: WG
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD
Date Sampled...: 08/18/09 Date Received..: 08/19/09
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 14:53
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	90	(30 - 150)			SW846 8270C
	88	(30 - 150)	0.83	(0-30)	SW846 8270C
Acenaphthylene	89	(30 - 150)			SW846 8270C
	89	(30 - 150)	0.28	(0-30)	SW846 8270C
Acridine	95	(30 - 150)			SW846 8270C
	93	(30 - 150)	1.7	(0-30)	SW846 8270C
Anthracene	100	(30 - 150)			SW846 8270C
	98	(30 - 150)	1.1	(0-30)	SW846 8270C
Benzo(a)anthracene	92	(30 - 150)			SW846 8270C
	95	(30 - 150)	3.9	(0-30)	SW846 8270C
Benzo(b)fluoranthene	93	(30 - 150)			SW846 8270C
	90	(30 - 150)	2.9	(0-30)	SW846 8270C
Benzo(k)fluoranthene	87	(30 - 150)			SW846 8270C
	87	(30 - 150)	0.41	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	58	(30 - 150)			SW846 8270C
	57	(30 - 150)	2.4	(0-30)	SW846 8270C
Dibenz(a,h)acridine	99	(30 - 150)			SW846 8270C
	97	(30 - 150)	2.2	(0-30)	SW846 8270C
Dibenz(a,j)acridine	100	(30 - 150)			SW846 8270C
	98	(30 - 150)	1.0	(0-30)	SW846 8270C
2,3-Benzofuran	72	(30 - 150)			SW846 8270C
	73	(30 - 150)	2.0	(0-30)	SW846 8270C
Benzo(ghi)perylene	102	(30 - 150)			SW846 8270C
	97	(30 - 150)	4.5	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	58	(30 - 150)			SW846 8270C
	58	(30 - 150)	1.6	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	60	(30 - 150)			SW846 8270C
	62	(30 - 150)	4.2	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	55	(30 - 150)			SW846 8270C
	55	(30 - 150)	0.96	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	57	(30 - 150)			SW846 8270C
	56	(30 - 150)	2.0	(0-30)	SW846 8270C
Benzo(a)pyrene	95	(30 - 150)			SW846 8270C
	92	(30 - 150)	1.7	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	83	(30 - 150)			SW846 8270C
	80	(30 - 150)	2.7	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	86	(30 - 150)			SW846 8270C
	86	(30 - 150)	0.73	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	97	(30 - 150)			SW846 8270C
	93	(30 - 150)	3.1	(0-30)	SW846 8270C
Benzo(b)thiophene	78	(30 - 150)			SW846 8270C
	78	(30 - 150)	0.24	(0-30)	SW846 8270C
3-Methylcholanthrene	93	(30 - 150)			SW846 8270C
	90	(30 - 150)	2.7	(0-30)	SW846 8270C
6-Methylchrysene	56	(30 - 150)			SW846 8270C
	56	(30 - 150)	0.91	(0-30)	SW846 8270C
1-Methylphenanthrene	59	(30 - 150)			SW846 8270C
	57	(30 - 150)	3.3	(0-30)	SW846 8270C
Biphenyl	85	(30 - 150)			SW846 8270C
	86	(30 - 150)	1.1	(0-30)	SW846 8270C
Carbazole	98	(30 - 150)			SW846 8270C
	95	(30 - 150)	2.6	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	91	(30 - 150)			SW846 8270C
	93	(30 - 150)	3.0	(0-30)	SW846 8270C
Chrysene	88	(43 - 124)			SW846 8270C
	91	(43 - 124)	4.0	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	98	(30 - 150)			SW846 8270C
	93	(30 - 150)	4.9	(0-30)	SW846 8270C
Dibenzofuran	96	(30 - 150)			SW846 8270C
	95	(30 - 150)	0.92	(0-30)	SW846 8270C
Dibenzothiophene	96	(30 - 150)			SW846 8270C
	94	(30 - 150)	1.0	(0-30)	SW846 8270C
2,3-Dihydroindene	66	(30 - 150)			SW846 8270C
	65	(30 - 150)	0.48	(0-30)	SW846 8270C
Fluoranthene	98	(30 - 150)			SW846 8270C
	92	(30 - 150)	5.1	(0-30)	SW846 8270C
Fluorene	92	(51 - 120)			SW846 8270C
	93	(51 - 120)	2.4	(0-30)	SW846 8270C
Indene	69	(49 - 108)			SW846 8270C
	69	(49 - 108)	0.33	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	101	(30 - 150)			SW846 8270C
	95	(30 - 150)	5.6	(0-30)	SW846 8270C
Indole	25 a	(30 - 150)			SW846 8270C
	22 a	(30 - 150)	9.7	(0-30)	SW846 8270C
2-Methylnaphthalene	81	(47 - 138)			SW846 8270C
	81	(47 - 138)	1.0	(0-30)	SW846 8270C
1-Methylnaphthalene	83	(30 - 150)			SW846 8270C
	82	(30 - 150)	0.28	(0-30)	SW846 8270C
Naphthalene	74	(43 - 128)			SW846 8270C
	72	(43 - 128)	1.5	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**95**	**(30 - 150)**			**SW846 8270C**
	92	**(30 - 150)**	**2.7**	**(0-30)**	**SW846 8270C**
Phenanthrene	**97**	**(30 - 150)**			**SW846 8270C**
	96	**(30 - 150)**	**0.83**	**(0-30)**	**SW846 8270C**
Pyrene	**97**	**(30 - 150)**			**SW846 8270C**
	91	**(30 - 150)**	**5.3**	**(0-30)**	**SW846 8270C**
Quinoline	**93**	**(40 - 126)**			**SW846 8270C**
	96	**(40 - 126)**	**3.1**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(30 - 160)
	89	(30 - 160)
Fluorene d-10	92	(36 - 127)
	94	(36 - 127)
Naphthalene-d8	82	(37 - 107)
	84	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 Work Order #...: LJEFD1AC-MS Matrix.....: WG
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD
Date Sampled...: 08/18/09 Date Received..: 08/19/09
Prep Date.....: 08/21/09 Analysis Date..: 08/25/09
Prep Batch #...: 9233054 Analysis Time..: 14:53
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	47.2	42.3	ug/L	90		SW846 8270C
	ND	47.5	42.0	ug/L	88	0.83	SW846 8270C
Acenaphthylene	ND	47.2	42.2	ug/L	89		SW846 8270C
	ND	47.5	42.1	ug/L	89	0.28	SW846 8270C
Acridine	ND	47.2	45.0	ug/L	95		SW846 8270C
	ND	47.5	44.2	ug/L	93	1.7	SW846 8270C
Anthracene	ND	47.2	47.0	ug/L	100		SW846 8270C
	ND	47.5	46.5	ug/L	98	1.1	SW846 8270C
Benzo(a)anthracene	ND	47.2	43.2	ug/L	92		SW846 8270C
	ND	47.5	45.0	ug/L	95	3.9	SW846 8270C
Benzo(b)fluoranthene	ND	47.2	44.0	ug/L	93		SW846 8270C
	ND	47.5	42.7	ug/L	90	2.9	SW846 8270C
Benzo(k)fluoranthene	ND	47.2	41.1	ug/L	87		SW846 8270C
	ND	47.5	41.3	ug/L	87	0.41	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.2	27.6	ug/L	58		SW846 8270C
	ND	47.5	26.9	ug/L	57	2.4	SW846 8270C
Dibenz(a,h)acridine	ND	47.2	46.9	ug/L	99		SW846 8270C
	ND	47.5	45.9	ug/L	97	2.2	SW846 8270C
Dibenz(a,j)acridine	ND	47.2	47.1	ug/L	100		SW846 8270C
	ND	47.5	46.6	ug/L	98	1.0	SW846 8270C
2,3-Benzofuran	ND	47.2	33.9	ug/L	72		SW846 8270C
	ND	47.5	34.6	ug/L	73	2.0	SW846 8270C
Benzo(ghi)perylene	ND	47.2	48.0	ug/L	102		SW846 8270C
	ND	47.5	45.9	ug/L	97	4.5	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.2	27.4	ug/L	58		SW846 8270C
	ND	47.5	27.8	ug/L	58	1.6	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.2	28.3	ug/L	60		SW846 8270C
	ND	47.5	29.5	ug/L	62	4.2	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.2	26.2	ug/L	55		SW846 8270C
	ND	47.5	25.9	ug/L	55	0.96	SW846 8270C
Dibenzo(a,l)pyrene	ND	47.2	27.0	ug/L	57		SW846 8270C
	ND	47.5	26.5	ug/L	56	2.0	SW846 8270C
Benzo(a)pyrene	ND	47.2	44.7	ug/L	95		SW846 8270C
	ND	47.5	43.9	ug/L	92	1.7	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.2	39.2	ug/L	83		SW846 8270C
	ND	47.5	38.1	ug/L	80	2.7	SW846 8270C
2,6-Dimethylnaphthalene	ND	47.2	40.6	ug/L	86		SW846 8270C
	ND	47.5	40.9	ug/L	86	0.73	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.2	45.6	ug/L	97		SW846 8270C
	ND	47.5	44.2	ug/L	93	3.1	SW846 8270C
Benzo(b)thiophene	ND	47.2	37.0	ug/L	78		SW846 8270C
	ND	47.5	36.9	ug/L	78	0.24	SW846 8270C
3-Methylcholanthrene	ND	47.2	43.8	ug/L	93		SW846 8270C
	ND	47.5	42.7	ug/L	90	2.7	SW846 8270C
6-Methylchrysene	ND	47.2	26.2	ug/L	56		SW846 8270C
	ND	47.5	26.5	ug/L	56	0.91	SW846 8270C
1-Methylphenanthrene	ND	47.2	27.8	ug/L	59		SW846 8270C
	ND	47.5	26.9	ug/L	57	3.3	SW846 8270C
Biphenyl	ND	47.2	40.2	ug/L	85		SW846 8270C
	ND	47.5	40.6	ug/L	86	1.1	SW846 8270C
Carbazole	ND	47.2	46.3	ug/L	98		SW846 8270C
	ND	47.5	45.1	ug/L	95	2.6	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	47.2	43.0	ug/L	91		SW846 8270C
	ND	47.5	44.3	ug/L	93	3.0	SW846 8270C
Chrysene	ND	47.2	41.8	ug/L	88		SW846 8270C
	ND	47.5	43.5	ug/L	91	4.0	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.2	46.4	ug/L	98		SW846 8270C
	ND	47.5	44.2	ug/L	93	4.9	SW846 8270C
Dibenzofuran	ND	47.2	45.5	ug/L	96		SW846 8270C
	ND	47.5	45.1	ug/L	95	0.92	SW846 8270C
Dibenzothiophene	ND	47.2	45.2	ug/L	96		SW846 8270C
	ND	47.5	44.7	ug/L	94	1.0	SW846 8270C
2,3-Dihydroindene	ND	47.2	30.9	ug/L	66		SW846 8270C
	ND	47.5	31.1	ug/L	65	0.48	SW846 8270C
Fluoranthene	ND	47.2	46.2	ug/L	98		SW846 8270C
	ND	47.5	43.9	ug/L	92	5.1	SW846 8270C
Fluorene	ND	47.2	43.3	ug/L	92		SW846 8270C
	ND	47.5	44.3	ug/L	93	2.4	SW846 8270C
Indene	ND	47.2	32.6	ug/L	69		SW846 8270C
	ND	47.5	32.7	ug/L	69	0.33	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.2	47.6	ug/L	101		SW846 8270C
	ND	47.5	45.0	ug/L	95	5.6	SW846 8270C
Indole	ND	47.2	11.7	ug/L	25 a		SW846 8270C
	ND	47.5	10.6	ug/L	22 a	9.7	SW846 8270C
2-Methylnaphthalene	ND	47.2	38.1	ug/L	81		SW846 8270C
	ND	47.5	38.5	ug/L	81	1.0	SW846 8270C
1-Methylnaphthalene	ND	47.2	39.1	ug/L	83		SW846 8270C
	ND	47.5	39.0	ug/L	82	0.28	SW846 8270C
Naphthalene	ND	47.2	34.9	ug/L	74		SW846 8270C
	ND	47.5	34.4	ug/L	72	1.5	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H190204 **Work Order #...:** LJEFD1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H190204-003 LJEFD1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	**ND**	**47.2**	**44.7**	**ug/L**	**95**		**SW846 8270C**
	ND	**47.5**	**43.5**	**ug/L**	**92**	**2.7**	**SW846 8270C**
Phenanthrene	**ND**	**47.2**	**45.9**	**ug/L**	**97**		**SW846 8270C**
	ND	**47.5**	**45.5**	**ug/L**	**96**	**0.83**	**SW846 8270C**
Pyrene	**ND**	**47.2**	**45.8**	**ug/L**	**97**		**SW846 8270C**
	ND	**47.5**	**43.4**	**ug/L**	**91**	**5.3**	**SW846 8270C**
Quinoline	**ND**	**47.2**	**44.0**	**ug/L**	**93**		**SW846 8270C**
	ND	**47.5**	**45.4**	**ug/L**	**96**	**3.1**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(30 - 160)
	89	(30 - 160)
Fluorene d-10	92	(36 - 127)
	94	(36 - 127)
Naphthalene-d8	82	(37 - 107)
	84	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

3.7 ☆6
4.2 FR4
2.7 8/19/8

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

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TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/18/09	115109
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: PAH PPB	Special Instructions/ Conditions of Receipt
W438-081809	8/18/09	1530		X			2						X	
W437-081809		1540												
W433-081809		0930												
W433D-081809		0935												
W433MS-081809		0940												
W433MSD-081809		0945												
W433FB-081809		0920												
W433FBD-081809		0925												
W27-081809		1330												
W20-081809		1415												
W101-081809		1205												
W409-081809		1030												

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/18/09	1700	1. Received By	8/19/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/18/09	115108
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 2**
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa U	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPB	Special Instructions/ Conditions of Receipt
W143-081809	8/18/09	1450		X			2						X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	8/18/09	1700	1. Received By	8/19/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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T 651.222.0841 F 651.222.8914 www.aecom.com

Memorandum

Date: March 10, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPB PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9H190204
Appendix L

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of nine aqueous samples and two field blanks for part per billion (ppb) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C. The samples were collected on August 18, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9H190204.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W438-081809	W437-081809
W433-081809	W433D-081809
W433FB-081809	W433FBD-081809
W27-081809	W20-081809
W101-081809	W409-081809
W143-081809	

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REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blank 9233054 or the field blanks (W433FB-081809 and W33FBD-081809).

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on samples W433-081809. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
Indole (MS)	25		30-150		J	UJ
Indole MSD	22		30-150		J	UJ
Associated sample: All samples in data package						

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The RPD in the laboratory data package were not consistent with RPD outlined in QAPP. The correct limits are 0-25 and not 0-30.

LCS Results

All % recoveries for both LCS samples analyzed with this data package were within the control limits outlined in the QAPP.

Field Duplicate Results

Samples W433-081809 and W433-081809 were the field duplicate pairs analyzed with this data set.

A total of 0 of 31 compounds were detected.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W437-081809 was initially analyzed undiluted. The results of some compounds fell outside the calibration range. The sample was then diluted at 20x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within $\pm$ 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this $\pm$ 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

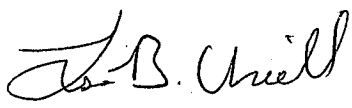
Project: Reilly Tar & Chemical Corporation

Lot #: D9H130327

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.



Lisa B. Uriell
Project Manager

September 2, 2009

CASE NARRATIVE
D9H130327

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Eleven samples plus one set of MS/MSD samples were received under chain of custody on August 13, 2009. The samples were received at temperatures of 4.2°C, 4.4°C, 3.0°C, 4.6°C, 3.9°C, 3.5°C and 2.4°C. All sample containers were received in acceptable condition, with the exception of the items noted below.

Two samples were received on August 14, 2009. The samples were received at a temperature of 1.4°C. All sample containers were received in acceptable condition, with the exception of the items noted below.

The FedEx US Airbill indicated that eight coolers were shipped from the field on August 12, 2009; however only seven coolers were received at the TestAmerica Denver laboratory on August 13, 2009. Samples W119-081209 and W411-081209, listed on the Chains of Custody, were in the misplaced cooler, and therefore were not received on August 13, 2009. The misplaced cooler containing samples W119-081209 and W411-081209 arrived at the TestAmerica Denver laboratory on August 14, 2009. All samples listed on Chains of Custody 115111 and 115112 were logged and reported under Lot D9H130327. The client was notified on August 13 and August 14, 2009.

Relinquished By information is not present on the Chains of Custody. The client was notified on August 13, 2009.

GC/MS Semivolatiles, Acid Compounds, Method SW846 8270C

All sample holding times were met.

MS/MSD were performed on sample SPL10T-081209, as requested. All spike parameters were within QC control limits.

No anomalies were noted.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

Surrogate Chrysene-d12 was recovered outside the QC control limits in samples W122-081209, W133-081209, W412-081209, W412D-081209 and W411-081209. Upon re-aliquoting and reanalyzing, the surrogate recovery outliers were still present, demonstrating that this anomaly is due to matrix interference. Therefore, corrective action is deemed unnecessary.

Please note that compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene could not be resolved in sample W133-081209; therefore, the combined peak reported as Benzo(b)fluoranthene is most likely a combination of the two compounds. Associated results in the analytical report have been flagged with a "K".

Low levels of Naphthalene are present in the method blank associated with QC batch 9228018. Because the concentration in the method blank is not present at a level greater than one half the reporting limit, corrective action is deemed unnecessary.

The LCS/LCSD associated with QC batch 9229209 exhibited 10 of the 44 Laboratory Control Spike compound recoveries outside the control limits. LCS/LCSD exhibited 3 of the 44 Laboratory Control Spike Duplicate compound recoveries. The LCS/LCSD exhibited 17 of the 44 Relative Percent Difference (RPD) data outside the control limits. The LCS/LCSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Laboratory Control Sample Evaluation and Data Reports.

Acenaphthene	Acenaphthylene	Acridine
Anthracene	Benzo(a)anthracene	Benzo(b)fluoranthene
Benzo(k)fluoranthene	7H-Dibenzo[c,g]carbazole	Dibenz(a,h)acridine
Dibenz(a,j)acridine	2,3-Benzofuran	Benzo(ghi)perylene
Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene	Dibenzo(a,h)pyrene
Dibenzo(a,l)pyrene	Benzo(a)pyrene	7,12-Dimethylbenz(a)anthracene
2,6-Dimethylnaphthalene	Benzo(e)pyrene	Benzo(b)thiophene
3-Methylcholanthrene	6-Methylchrysene	1-Methylphenanthrene
Biphenyl	Carbazole	2,3,5-Trimethylnaphthalene
Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran
Dibenzothiophene	2,3-Dihydroindene	Fluoranthene
Fluorene	Indene	Indeno(1,2,3-cd)pyrene
Indole	2-Methylnaphthalene	1-Methylnaphthalene
Naphthalene	Perylene	Phenanthrene
Pyrene	Quinoline	

Analytes 7H-Dibenzo[c,g]carbazole, Dibenz(a,h)acridine, Dibenz(a,j)acridine, Dibenzo(a,e)pyrene, Dibenzo(a,i)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,l)pyrene, 7,12-Dimethylbenz(a)anthracene, 2,6-Dimethylnaphthalene, 3-Methylcholanthrene, 6-Methylchrysene, 1-Methylphenanthrene, 2,3,5-Trimethylnaphthalene, are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS/LCSD was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

The LCS/LCSD associated with QC batch 9228018 exhibited 10 of the 44 Laboratory Control Spike compound recoveries outside the control limits. LCS/LCSD exhibited 3 of the 44 Laboratory Control Spike Duplicate compound recoveries. The LCS/LCSD exhibited 17 of the 44 Relative Percent Difference (RPD) data outside the control limits. The LCS/LCSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Laboratory Control Sample Evaluation and Data Reports.

GC/MS Semivolatiles, Method SW846 8270C SIM (continued)

Acridine	Anthracene	Benzo(b)fluoranthene
Benzo(k)fluoranthene	Dibenz(a,h)acridine	Dibenz(a,j)acridine
Benzo(ghi)perylene	Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene
Dibenzo(a,h)pyrene	Dibenzo(a,l)pyrene	Benzo(a)pyrene
Dibenzo(a,h)anthracene	3-Methylcholanthrene	7,12-Dimethylbenz(a)anthracene
Indeno(1,2,3-cd)pyrene	Indole	Perylene
Quinoline		

Analytes Dibenz(a,h)acridine, Dibenz(a,j)acridine Dibenzo(a,e)pyrene, Dibenzo(a,i)pyrene, Dibenzo(a,h)pyrene, Dibenzo(a,l)pyrene, 7,12-Dimethylbenz(a)anthracene and 3-Methylcholanthrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS/LCSD was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

The method required MS/MSDs could not be performed for QC batches 9228018 and 8229209, due to insufficient sample volume.

No other anomalies were noted.

Data Completeness for Method 8270C Acid Compounds

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2007 QAPP, and the percent completeness was determined below.

DATA COMPLETENES CALCULATION LOT D9H130327 ANALYSIS: Acid Compounds by SW846 8270C		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	11	11
MB Surrogates	6	6
FB/FBD	22	22
MS	6	6
MS Surrogates	6	6
MSD	6	6
MSD Surrogates	6	6
MS/MSD RPD	6	6
Sample/Dup. RPD	11	11
LCS	6	6
LCS Surrogates	6	6
Sample Surrogates	30	30
Samples and QC Internal Standard Area	27	27
TOTAL	**149**	**149**
% Completeness	**100.00%**	

Sample Duplicate Calculation for Method 8270C Acid Compounds

Sample Duplicate RPD					
LOT D9H130327					
Sample: SLP10T-081209		**DUP: SLP10TD-081209**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
4-Chloro-3-methylphenol	ND	4-Chloro-3-methylphenol	ND	0.0	
2-Chlorophenol	ND	2-Chlorophenol	ND	0.0	
2,4-Dichlorophenol	ND	2,4-Dichlorophenol	ND	0.0	
2,4-Dimethylphenol	ND	2,4-Dimethylphenol	ND	0.0	
4,6-Dinitro-2-methylphenol	ND	4,6-Dinitro-2-methylphenol	ND	0.0	
2,4-Dinitrophenol	ND	2,4-Dinitrophenol	ND	0.0	
2-Nitrophenol	ND	2-Nitrophenol	ND	0.0	
4-Nitrophenol	ND	4-Nitrophenol	ND	0.0	
Pentachlorophenol	ND	Pentachlorophenol	ND	0.0	
Phenol	ND	Phenol	ND	0.0	
2,4,6-Trichlorophenol	ND	2,4,6-Trichlorophenol	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND. Considered acceptable if the positive result is less than 4x the RL.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9H130327
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	62	62
MB Surrogates	6	6
LCS/LCSD	28	25
LCS/LCSD Surrogates	12	12
FB/FBD	62	62
MS	NA	NA
MS Surrogates	NA	NA
MSD	NA	NA
MSD Surrogates	NA	NA
MS/MSD RPD	NA	NA
Sample/Dup. RPD	31	31
Sample Surrogates	24	19
Samples and QC Internal Standard Area	42	42
TOTAL	**267**	**259**
% Completeness	**97.0%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9H130327					
Sample: W412-081209		**DUP: W412D-081209**			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	20	Acenaphthene	14	35.3	
Acenaphthylene	1.7	Acenaphthylene	1.3	26.7	
Acridine	29	Acridine	19	41.7	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	15	Benzo(b)thiophene	9.2	47.9	
Biphenyl	6.1	Biphenyl	5.7	6.8	
Carbazole	24	Carbazole	17	34.1	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	3.1	Dibenzothiophene	2.4	25.5	
2,3-Dihydroindene	20	2,3-Dihydroindene	12	50.0	
Fluoranthene	2.0	Fluoranthene	2.1	4.9	
Fluorene	8.9	Fluorene	6.7	28.2	
Indene	8.7	Indene	5.5	45.1	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	16	2-Methylnaphthalene	10	46.2	
1-Methylnaphthalene	21	1-Methylnaphthalene	14	40.0	
Naphthalene	250	Naphthalene	150	50.0	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	13	Phenanthrene	10	26.1	
Pyrene	11	Pyrene	10	9.5	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9H130327

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W122-081209 08/12/09 15:10 001				
Acenaphthene	8.8	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.1 J	4.8	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	1.7 J	6.2	ng/L	SW846 8270C SIM
Benzo(e)pyrene	1.3 J	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	51	5.2	ng/L	SW846 8270C SIM
Biphenyl	5.9	5.6	ng/L	SW846 8270C SIM
Dibenzofuran	6.8	5.7	ng/L	SW846 8270C SIM
2,3-Dihydroindene	9.6	5.0	ng/L	SW846 8270C SIM
Fluorene	4.7	4.1	ng/L	SW846 8270C SIM
2-Methylnaphthalene	6.7	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	8.8	5.6	ng/L	SW846 8270C SIM
Naphthalene	71 B	8.6	ng/L	SW846 8270C SIM
Pyrene	18	4.2	ng/L	SW846 8270C SIM
W133-081209 08/12/09 15:30 002				
Acenaphthene	21	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.3 J	4.8	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	2.3 J,K	4.7	ng/L	SW846 8270C SIM
Benzo(b)thiophene	9.7	5.2	ng/L	SW846 8270C SIM
Biphenyl	16	5.6	ng/L	SW846 8270C SIM
Carbazole	45	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	11	5.7	ng/L	SW846 8270C SIM
2,3-Dihydroindene	24	5.0	ng/L	SW846 8270C SIM
Fluorene	6.9	4.1	ng/L	SW846 8270C SIM
Indene	4.5 J	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	19	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	22	5.6	ng/L	SW846 8270C SIM
Naphthalene	140 B	8.6	ng/L	SW846 8270C SIM
Phenanthrene	9.2	6.3	ng/L	SW846 8270C SIM
Pyrene	13	4.2	ng/L	SW846 8270C SIM
W412-081209 08/12/09 13:05 003				
Acenaphthene	20	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.7 J	4.8	ng/L	SW846 8270C SIM
Acridine	29	6.5	ng/L	SW846 8270C SIM
Benzo(b)thiophene	15	5.2	ng/L	SW846 8270C SIM
Biphenyl	6.1	5.6	ng/L	SW846 8270C SIM
Carbazole	24	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	3.1 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	20	5.0	ng/L	SW846 8270C SIM
Fluoranthene	2.0 J	4.6	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9H130327

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W412-081209 08/12/09 13:05 003				
Fluorene	8.9	4.1	ng/L	SW846 8270C SIM
Indene	8.7	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	16	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	21	5.6	ng/L	SW846 8270C SIM
Naphthalene	250 B	8.6	ng/L	SW846 8270C SIM
Phenanthrene	13	6.3	ng/L	SW846 8270C SIM
Pyrene	11	4.2	ng/L	SW846 8270C SIM
W412D-081209 08/12/09 13:10 004				
Acenaphthene	14	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	1.3 J	4.8	ng/L	SW846 8270C SIM
Acridine	19	6.5	ng/L	SW846 8270C SIM
Benzo(b)thiophene	9.2	5.2	ng/L	SW846 8270C SIM
Biphenyl	5.7	5.6	ng/L	SW846 8270C SIM
Carbazole	17	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	2.4 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	12	5.0	ng/L	SW846 8270C SIM
Fluoranthene	2.1 J	4.6	ng/L	SW846 8270C SIM
Fluorene	6.7	4.1	ng/L	SW846 8270C SIM
Indene	5.5	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	10	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	14	5.6	ng/L	SW846 8270C SIM
Naphthalene	150 B	8.6	ng/L	SW846 8270C SIM
Phenanthrene	10	6.3	ng/L	SW846 8270C SIM
Pyrene	10	4.2	ng/L	SW846 8270C SIM
W412FB-081209 08/12/09 13:15 005				
2,3-Dihydroindene	0.80 J	5.0	ng/L	SW846 8270C SIM
2-Methylnaphthalene	1.3 J	5.9	ng/L	SW846 8270C SIM
Naphthalene	3.2 J,B	8.6	ng/L	SW846 8270C SIM
W412FBD-081209 08/12/09 13:20 006				
2-Methylnaphthalene	1.3 J	5.9	ng/L	SW846 8270C SIM
Naphthalene	3.6 J	8.6	ng/L	SW846 8270C SIM
W119-081209 08/12/09 10:30 012				
Acenaphthene	66	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	2.2 J	4.8	ng/L	SW846 8270C SIM
Acridine	6.8	6.5	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9H130327

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W119-081209 08/12/09 10:30 012				
Anthracene	2.8 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	6.8	5.2	ng/L	SW846 8270C SIM
2,3-Dihydroindene	5.4	5.0	ng/L	SW846 8270C SIM
Indene	15	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	1.9 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	3.0 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	4.4 J	8.6	ng/L	SW846 8270C SIM
Pyrene	10	4.2	ng/L	SW846 8270C SIM
W411-081209 08/12/09 11:15 013				
Acenaphthene	1.2 J	5.7	ng/L	SW846 8270C SIM
Acridine	7.7	6.5	ng/L	SW846 8270C SIM
2,3-Dihydroindene	0.72 J	5.0	ng/L	SW846 8270C SIM
Fluorene	0.96 J	4.1	ng/L	SW846 8270C SIM
2-Methylnaphthalene	2.5 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	2.2 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	3.4 J	8.6	ng/L	SW846 8270C SIM
Pyrene	3.1 J	4.2	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9H130327

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9H130327

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Rhain Carpenter	000130
SW846 8270C SIM	Ashley Wolfe	004211

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9H130327

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LH5LE	001	W122-081209	08/12/09	15:10
LH5LJ	002	W133-081209	08/12/09	15:30
LH5LL	003	W412-081209	08/12/09	13:05
LH5LN	004	W412D-081209	08/12/09	13:10
LH5LP	005	W412FB-081209	08/12/09	13:15
LH5LQ	006	W412FBD-081209	08/12/09	13:20
LH5LV	007	SLP4T-081209	08/12/09	08:20
LH5LX	008	SLP10T-081209	08/12/09	09:20
LH5L0	009	SLP10TD-081209	08/12/09	09:25
LH5L1	010	SLP10TFB-081209	08/12/09	09:40
LH5L2	011	SLP10TFBD-081209	08/12/09	09:45
LH7EW	012	W119-081209	08/12/09	10:30
LH7FC	013	W411-081209	08/12/09	11:15

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: SLP4T-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-007 **Work Order #...:** LH5LV1AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/13/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/18/09
Prep Batch #...: 9226256 **Analysis Time..:** 00:18
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Chloro-3-methylphenol	ND	20	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	60	ug/L
2,4-Dinitrophenol	ND	60	ug/L
2-Nitrophenol	ND	20	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	60	ug/L
Phenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	76	(40 - 120)
Phenol-d5	80	(51 - 120)
Nitrobenzene-d5	78	(47 - 120)
2-Fluorobiphenyl	76	(37 - 120)
2,4,6-Tribromophenol	83	(47 - 120)
Terphenyl-d14	98	(30 - 127)

City of Saint Louis Park

Client Sample ID: SLP10T-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-008 **Work Order #...:** LH5LX1AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/13/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/18/09
Prep Batch #...: 9226256 **Analysis Time..:** 00:39
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Chloro-3-methylphenol	ND	20	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	60	ug/L
2,4-Dinitrophenol	ND	60	ug/L
2-Nitrophenol	ND	20	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	60	ug/L
Phenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	76	(40 - 120)
Phenol-d5	78	(51 - 120)
Nitrobenzene-d5	75	(47 - 120)
2-Fluorobiphenyl	75	(37 - 120)
2,4,6-Tribromophenol	82	(47 - 120)
Terphenyl-d14	99	(30 - 127)

City of Saint Louis Park

Client Sample ID: SLP10TD-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-009 **Work Order #...:** LH5L01AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/13/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/18/09
Prep Batch #...: 9226256 **Analysis Time..:** 01:42
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Chloro-3-methylphenol	ND	20	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	60	ug/L
2,4-Dinitrophenol	ND	60	ug/L
2-Nitrophenol	ND	20	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	60	ug/L
Phenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	71	(40 - 120)
Phenol-d5	77	(51 - 120)
Nitrobenzene-d5	73	(47 - 120)
2-Fluorobiphenyl	71	(37 - 120)
2,4,6-Tribromophenol	86	(47 - 120)
Terphenyl-d14	101	(30 - 127)

City of Saint Louis Park

Client Sample ID: SLP10TFB-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-010 **Work Order #...:** LH5L11AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/13/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/18/09
Prep Batch #...: 9226256 **Analysis Time..:** 02:03
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Chloro-3-methylphenol	ND	20	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	60	ug/L
2,4-Dinitrophenol	ND	60	ug/L
2-Nitrophenol	ND	20	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	60	ug/L
Phenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(40 - 120)
Phenol-d5	77	(51 - 120)
Nitrobenzene-d5	76	(47 - 120)
2-Fluorobiphenyl	75	(37 - 120)
2,4,6-Tribromophenol	77	(47 - 120)
Terphenyl-d14	96	(30 - 127)

City of Saint Louis Park

Client Sample ID: SLP10TFBD-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-011 **Work Order #...:** LH5L21AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/13/09
Prep Date.....: 08/14/09 **Analysis Date..:** 08/18/09
Prep Batch #...: 9226256 **Analysis Time..:** 02:24
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Chloro-3-methylphenol	ND	20	ug/L
2-Chlorophenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	60	ug/L
2,4-Dinitrophenol	ND	60	ug/L
2-Nitrophenol	ND	20	ug/L
4-Nitrophenol	ND	50	ug/L
Pentachlorophenol	ND	60	ug/L
Phenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	76	(40 - 120)
Phenol-d5	80	(51 - 120)
Nitrobenzene-d5	78	(47 - 120)
2-Fluorobiphenyl	78	(37 - 120)
2,4,6-Tribromophenol	78	(47 - 120)
Terphenyl-d14	99	(30 - 127)

City of Saint Louis Park

Client Sample ID: W122-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-001	**Work Order #...:** LH5LE1AA	**Matrix.....:** WG	
Date Sampled...: 08/12/09	**Date Received..:** 08/13/09		
Prep Date.....: 08/16/09	**Analysis Date..:** 08/27/09		
Prep Batch #...: 9228018	**Analysis Time..:** 13:07		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**8.8**	**5.7**	**ng/L**
Acenaphthylene	**1.1 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	**1.7 J**	**6.2**	**ng/L**
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	**1.3 J**	**4.3**	**ng/L**
Benzo(b)thiophene	**51**	**5.2**	**ng/L**
Biphenyl	**5.9**	**5.6**	**ng/L**
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**6.8**	**5.7**	**ng/L**
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**9.6**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	**4.7**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**6.7**	**5.9**	**ng/L**
1-Methylnaphthalene	**8.8**	**5.6**	**ng/L**
Naphthalene	**71 B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**18**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	17 *	(28 - 101)
Fluorene d-10	43	(23 - 84)
Naphthalene-d8	41	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: W133-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-002 **Work Order #...:** LH5LJ1AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/13/09
Prep Date.....: 08/16/09 **Analysis Date..:** 08/27/09
Prep Batch #...: 9228018 **Analysis Time..:** 13:41
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**21**	**5.7**	**ng/L**
Acenaphthylene	**1.3 J**	**4.8**	**ng/L**
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	**2.3 J,K**	**4.7**	**ng/L**
Benzo(k)fluoranthene	ND K	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**9.7**	**5.2**	**ng/L**
Biphenyl	**16**	**5.6**	**ng/L**
Carbazole	**45**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**11**	**5.7**	**ng/L**
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**24**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	**6.9**	**4.1**	**ng/L**
Indene	**4.5 J**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**19**	**5.9**	**ng/L**
1-Methylnaphthalene	**22**	**5.6**	**ng/L**
Naphthalene	**140 B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**9.2**	**6.3**	**ng/L**
Pyrene	**13**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	9.8 *	(28 - 101)
Fluorene d-10	38	(23 - 84)
Naphthalene-d8	38	(22 - 97)

(Continued on next page)

City of Saint Louis Park

Client Sample ID: W133-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-002 Work Order #...: LH5LJ1AA Matrix.....: WG

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

K Benzo(b&k)fluoranthene unresolved-matrix.Total reported as Benzo(b)fluoranthene.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: W412-081209

GC/MS Semivolatiles

Lot-Sample #...:	D9H130327-003	**Work Order #...:**	LH5LL1AA	**Matrix.....:**	WG
Date Sampled...:	08/12/09	**Date Received..:**	08/13/09		
Prep Date.....:	08/16/09	**Analysis Date..:**	08/27/09		
Prep Batch #...:	9228018	**Analysis Time..:**	14:16		
Dilution Factor:	1				
		Method.....:	SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**20**	**5.7**	**ng/L**
Acenaphthylene	**1.7 J**	**4.8**	**ng/L**
Acridine	**29**	**6.5**	**ng/L**
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**15**	**5.2**	**ng/L**
Biphenyl	**6.1**	**5.6**	**ng/L**
Carbazole	**24**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**3.1 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**20**	**5.0**	**ng/L**
Fluoranthene	**2.0 J**	**4.6**	**ng/L**
Fluorene	**8.9**	**4.1**	**ng/L**
Indene	**8.7**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**16**	**5.9**	**ng/L**
1-Methylnaphthalene	**21**	**5.6**	**ng/L**
Naphthalene	**250 B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**13**	**6.3**	**ng/L**
Pyrene	**11**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	14 *	(28 - 101)
Fluorene d-10	50	(23 - 84)
Naphthalene-d8	56	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: W412D-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-004	**Work Order #...:** LH5LN1AA	**Matrix.....:** WG	
Date Sampled...: 08/12/09	**Date Received..:** 08/13/09		
Prep Date.....: 08/16/09	**Analysis Date..:** 08/27/09		
Prep Batch #...: 9228018	**Analysis Time..:** 14:50		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**14**	**5.7**	**ng/L**
Acenaphthylene	**1.3 J**	**4.8**	**ng/L**
Acridine	**19**	**6.5**	**ng/L**
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**9.2**	**5.2**	**ng/L**
Biphenyl	**5.7**	**5.6**	**ng/L**
Carbazole	**17**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**2.4 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**12**	**5.0**	**ng/L**
Fluoranthene	**2.1 J**	**4.6**	**ng/L**
Fluorene	**6.7**	**4.1**	**ng/L**
Indene	**5.5**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**10**	**5.9**	**ng/L**
1-Methylnaphthalene	**14**	**5.6**	**ng/L**
Naphthalene	**150 B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	**10**	**6.3**	**ng/L**
Pyrene	**10**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	9.1 *	(28 - 101)
Fluorene d-10	36	(23 - 84)
Naphthalene-d8	35	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: W412FB-081209

GC/MS Semivolatiles

Lot-Sample #...:	D9H130327-005	**Work Order #...:**	LH5LP1AA	**Matrix.....:**	WG
Date Sampled...:	08/12/09	**Date Received..:**	08/13/09		
Prep Date.....:	08/16/09	**Analysis Date..:**	08/27/09		
Prep Batch #...:	9228018	**Analysis Time..:**	15:24		
Dilution Factor:	1				
		Method.....:	SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**0.80 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**1.3 J**	**5.9**	**ng/L**
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**3.2 J,B**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	70	(28 - 101)
Fluorene d-10	56	(23 - 84)
Naphthalene-d8	67	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

City of Saint Louis Park

Client Sample ID: W412FBD-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-006 **Work Order #...:** LH5LQ1AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/13/09
Prep Date.....: 08/17/09 **Analysis Date..:** 08/27/09
Prep Batch #...: 9229209 **Analysis Time..:** 11:25
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**1.3 J**	**5.9**	**ng/L**
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**3.6 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	67	(28 - 101)
Fluorene d-10	51	(23 - 84)
Naphthalene-d8	62	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W119-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-012	**Work Order #...:** LH7EW1AA	**Matrix.....:** WG	
Date Sampled...: 08/12/09	**Date Received..:** 08/14/09		
Prep Date.....: 08/17/09	**Analysis Date..:** 08/27/09		
Prep Batch #...: 9229209	**Analysis Time..:** 11:59		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**66**	**5.7**	**ng/L**
Acenaphthylene	**2.2 J**	**4.8**	**ng/L**
Acridine	**6.8**	**6.5**	**ng/L**
Anthracene	**2.8 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**6.8**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**5.4**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**15**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**1.9 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**3.0 J**	**5.6**	**ng/L**
Naphthalene	**4.4 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**10**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	29	(28 - 101)
Fluorene d-10	50	(23 - 84)
Naphthalene-d8	61	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W411-081209

GC/MS Semivolatiles

Lot-Sample #...: D9H130327-013 **Work Order #...:** LH7FC1AA **Matrix.....:** WG
Date Sampled...: 08/12/09 **Date Received..:** 08/14/09
Prep Date.....: 08/17/09 **Analysis Date..:** 08/27/09
Prep Batch #...: 9229209 **Analysis Time..:** 12:33
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**1.2 J**	**5.7**	**ng/L**
Acenaphthylene	ND	4.8	ng/L
Acridine	**7.7**	**6.5**	**ng/L**
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**0.72 J**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	**0.96 J**	**4.1**	**ng/L**
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**2.5 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**2.2 J**	**5.6**	**ng/L**
Naphthalene	**3.4 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**3.1 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	21 *	(28 - 101)
Fluorene d-10	39	(23 - 84)
Naphthalene-d8	45	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9H130327

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C SIM		9228018	
002	WG	SW846 8270C SIM		9228018	
003	WG	SW846 8270C SIM		9228018	
004	WG	SW846 8270C SIM		9228018	
005	WG	SW846 8270C SIM		9228018	
006	WG	SW846 8270C SIM		9229209	
007	WG	SW846 8270C		9226256	9226141
008	WG	SW846 8270C		9226256	9226141
009	WG	SW846 8270C		9226256	9226141
010	WG	SW846 8270C		9226256	9226141
011	WG	SW846 8270C		9226256	9226141
012	WG	SW846 8270C SIM		9229209	
013	WG	SW846 8270C SIM		9229209	

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH6F81AA **Matrix.....:** WATER
MB Lot-Sample #: D9H140000-256

Prep Date.....: 08/14/09 **Analysis Time..:** 19:05
Analysis Date..: 08/17/09 **Prep Batch #...:** 9226256
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
4-Chloro-3-methylphenol	ND	20	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	60	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	60	ug/L	SW846 8270C
2-Nitrophenol	ND	20	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Pentachlorophenol	ND	60	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichlorophenol	ND	20	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	77	(40 - 120)
Phenol-d5	81	(51 - 120)
Nitrobenzene-d5	78	(47 - 120)
2-Fluorobiphenyl	81	(37 - 120)
2,4,6-Tribromophenol	84	(47 - 120)
Terphenyl-d14	96	(30 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH6F81AC Matrix.....: WATER
LCS Lot-Sample#: D9H140000-256
Prep Date.....: 08/14/09 Analysis Date..: 08/17/09
Prep Batch #...: 9226256 Analysis Time..: 19:26
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,4,6-Trichloro-phenol	**86**	**(52 - 120)**	**SW846 8270C**
4-Chloro-3-methylphenol	**84**	**(57 - 120)**	**SW846 8270C**
2-Chlorophenol	**74**	**(55 - 120)**	**SW846 8270C**
4-Nitrophenol	**94**	**(48 - 120)**	**SW846 8270C**
Pentachlorophenol	**95**	**(50 - 120)**	**SW846 8270C**
Phenol	**76**	**(54 - 120)**	**SW846 8270C**
Acenaphthene	**84**	**(52 - 120)**	**SW846 8270C**
1,4-Dichlorobenzene	**68**	**(30 - 120)**	**SW846 8270C**
2,4-Dinitrotoluene	**91**	**(59 - 120)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**81**	**(52 - 120)**	**SW846 8270C**
Pyrene	**90**	**(52 - 120)**	**SW846 8270C**
1,2,4-Trichloro-benzene	**70**	**(35 - 120)**	**SW846 8270C**
Anthracene	**88**	**(56 - 120)**	**SW846 8270C**
Carbazole	**83**	**(56 - 120)**	**SW846 8270C**
2-Methylnaphthalene	**82**	**(48 - 120)**	**SW846 8270C**
2-Methylphenol	**76**	**(50 - 120)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(47 - 120)
Phenol-d5	75	(56 - 120)
Nitrobenzene-d5	75	(55 - 120)
2-Fluorobiphenyl	84	(39 - 120)
2,4,6-Tribromophenol	89	(53 - 120)
Terphenyl-d14	91	(54 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH6F81AC **Matrix.....:** WATER
LCS Lot-Sample#: D9H140000-256
Prep Date.....: 08/14/09 **Analysis Date..:** 08/17/09
Prep Batch #...: 9226256 **Analysis Time..:** 19:26
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,4,6-Trichloro-phenol	**100**	**86.2**	**ug/L**	**86**	**SW846 8270C**
4-Chloro-3-methylphenol	**100**	**84.4**	**ug/L**	**84**	**SW846 8270C**
2-Chlorophenol	**100**	**73.8**	**ug/L**	**74**	**SW846 8270C**
4-Nitrophenol	**100**	**93.5**	**ug/L**	**94**	**SW846 8270C**
Pentachlorophenol	**100**	**95.5**	**ug/L**	**95**	**SW846 8270C**
Phenol	**100**	**76.3**	**ug/L**	**76**	**SW846 8270C**
Acenaphthene	**100**	**84.3**	**ug/L**	**84**	**SW846 8270C**
1,4-Dichlorobenzene	**100**	**67.8**	**ug/L**	**68**	**SW846 8270C**
2,4-Dinitrotoluene	**100**	**91.4**	**ug/L**	**91**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**100**	**81.3**	**ug/L**	**81**	**SW846 8270C**
Pyrene	**100**	**90.2**	**ug/L**	**90**	**SW846 8270C**
1,2,4-Trichloro-benzene	**100**	**70.1**	**ug/L**	**70**	**SW846 8270C**
Anthracene	**100**	**87.8**	**ug/L**	**88**	**SW846 8270C**
Carbazole	**100**	**83.4**	**ug/L**	**83**	**SW846 8270C**
2-Methylnaphthalene	**100**	**82.2**	**ug/L**	**82**	**SW846 8270C**
2-Methylphenol	**100**	**76.1**	**ug/L**	**76**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(47 - 120)
Phenol-d5	75	(56 - 120)
Nitrobenzene-d5	75	(55 - 120)
2-Fluorobiphenyl	84	(39 - 120)
2,4,6-Tribromophenol	89	(53 - 120)
Terphenyl-d14	91	(54 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH5LX1AC-MS Matrix.....: WG
MS Lot-Sample #: D9H130327-008 LH5LX1AD-MSD
Date Sampled...: 08/12/09 Date Received..: 08/13/09
Prep Date.....: 08/14/09 Analysis Date..: 08/18/09
Prep Batch #...: 9226256 Analysis Time..: 01:00
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
4-Chloro-3-methylphenol	89	(54 - 120)			SW846 8270C
	87	(54 - 120)	4.5	(0-59)	SW846 8270C
2-Chlorophenol	77	(50 - 120)			SW846 8270C
	75	(50 - 120)	3.9	(0-47)	SW846 8270C
4-Nitrophenol	100	(40 - 122)			SW846 8270C
	101	(40 - 122)	1.4	(0-61)	SW846 8270C
Pentachlorophenol	102	(48 - 120)			SW846 8270C
	99	(48 - 120)	4.3	(0-50)	SW846 8270C
Phenol	81	(46 - 120)			SW846 8270C
	79	(46 - 120)	4.6	(0-47)	SW846 8270C
2,4,6-Trichloro-phenol	91	(52 - 120)			SW846 8270C
	90	(52 - 120)	3.0	(0-30)	SW846 8270C
Acenaphthene	86	(49 - 120)			SW846 8270C
	85	(49 - 120)	3.6	(0-42)	SW846 8270C
1,4-Dichlorobenzene	66	(33 - 120)			SW846 8270C
	62	(33 - 120)	7.8	(0-52)	SW846 8270C
2,4-Dinitrotoluene	97	(52 - 120)			SW846 8270C
	95	(52 - 120)	4.3	(0-47)	SW846 8270C
N-Nitrosodi-n-propyl-amine	84	(44 - 120)			SW846 8270C
	82	(44 - 120)	3.5	(0-45)	SW846 8270C
Pyrene	93	(35 - 122)			SW846 8270C
	92	(35 - 122)	2.8	(0-58)	SW846 8270C
1,2,4-Trichloro-benzene	73	(33 - 120)			SW846 8270C
	69	(33 - 120)	7.2	(0-50)	SW846 8270C
Anthracene	87	(52 - 120)			SW846 8270C
	88	(52 - 120)	0.50	(0-30)	SW846 8270C
Carbazole	92	(48 - 120)			SW846 8270C
	89	(48 - 120)	4.6	(0-30)	SW846 8270C
2-Methylnaphthalene	86	(48 - 120)			SW846 8270C
	82	(48 - 120)	6.8	(0-32)	SW846 8270C
2-Methylphenol	79	(50 - 120)			SW846 8270C
	78	(50 - 120)	2.7	(0-30)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH5LX1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H130327-008 LH5LX1AD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	72	(40 - 120)
	67	(40 - 120)
Phenol-d5	78	(51 - 120)
	75	(51 - 120)
Nitrobenzene-d5	82	(47 - 120)
	78	(47 - 120)
2-Fluorobiphenyl	85	(37 - 120)
	84	(37 - 120)
2,4,6-Tribromophenol	92	(47 - 120)
	91	(47 - 120)
Terphenyl-d14	95	(30 - 127)
	93	(30 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH5LX1AC-MS Matrix.....: WG
MS Lot-Sample #: D9H130327-008 LH5LX1AD-MSD
Date Sampled...: 08/12/09 Date Received..: 08/13/09
Prep Date.....: 08/14/09 Analysis Date..: 08/18/09
Prep Batch #...: 9226256 Analysis Time..: 01:00
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
4-Chloro-3-methylphenol	ND	96.2	85.8	ug/L	89		SW846 8270C
	ND	94.7	82.0	ug/L	87	4.5	SW846 8270C
2-Chlorophenol	ND	96.2	73.8	ug/L	77		SW846 8270C
	ND	94.7	71.0	ug/L	75	3.9	SW846 8270C
4-Nitrophenol	ND	96.2	96.6	ug/L	100		SW846 8270C
	ND	94.7	95.2	ug/L	101	1.4	SW846 8270C
Pentachlorophenol	ND	96.2	98.1	ug/L	102		SW846 8270C
	ND	94.7	94.0	ug/L	99	4.3	SW846 8270C
Phenol	ND	96.2	78.2	ug/L	81		SW846 8270C
	ND	94.7	74.6	ug/L	79	4.6	SW846 8270C
2,4,6-Trichloro-phenol	ND	96.2	87.6	ug/L	91		SW846 8270C
	ND	94.7	85.1	ug/L	90	3.0	SW846 8270C
Acenaphthene	ND	96.2	83.2	ug/L	86		SW846 8270C
	ND	94.7	80.3	ug/L	85	3.6	SW846 8270C
1,4-Dichlorobenzene	ND	96.2	63.7	ug/L	66		SW846 8270C
	ND	94.7	58.9	ug/L	62	7.8	SW846 8270C
2,4-Dinitrotoluene	ND	96.2	93.8	ug/L	97		SW846 8270C
	ND	94.7	89.8	ug/L	95	4.3	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	96.2	80.6	ug/L	84		SW846 8270C
	ND	94.7	77.9	ug/L	82	3.5	SW846 8270C
Pyrene	ND	96.2	89.6	ug/L	93		SW846 8270C
	ND	94.7	87.1	ug/L	92	2.8	SW846 8270C
1,2,4-Trichloro-benzene	ND	96.2	70.1	ug/L	73		SW846 8270C
	ND	94.7	65.2	ug/L	69	7.2	SW846 8270C
Anthracene	ND	96.2	84.1	ug/L	87		SW846 8270C
	ND	94.7	83.6	ug/L	88	0.50	SW846 8270C
Carbazole	ND	96.2	88.5	ug/L	92		SW846 8270C
	ND	94.7	84.5	ug/L	89	4.6	SW846 8270C
2-Methylnaphthalene	ND	96.2	83.0	ug/L	86		SW846 8270C
	ND	94.7	77.5	ug/L	82	6.8	SW846 8270C
2-Methylphenol	ND	96.2	76.0	ug/L	79		SW846 8270C
	ND	94.7	73.9	ug/L	78	2.7	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH5LX1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9H130327-008 LH5LX1AD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	72	(40 - 120)
	67	(40 - 120)
Phenol-d5	78	(51 - 120)
	75	(51 - 120)
Nitrobenzene-d5	82	(47 - 120)
	78	(47 - 120)
2-Fluorobiphenyl	85	(37 - 120)
	84	(37 - 120)
2,4,6-Tribromophenol	92	(47 - 120)
	91	(47 - 120)
Terphenyl-d14	95	(30 - 127)
	93	(30 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH83G1AA **Matrix.....:** WATER
MB Lot-Sample #: D9H160000-018

Prep Date.....: 08/16/09 **Analysis Time..:** 09:43
Analysis Date..: 08/27/09 **Prep Batch #...:** 9228018
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	**4.0 J**	**8.6**	**ng/L**	**SW846 8270C SIM**
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	70	(28 - 101)
Fluorene d-10	60	(23 - 84)
Naphthalene-d8	81	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH9FH1AA **Matrix.....:** WATER
MB Lot-Sample #: D9H170000-209

Prep Date.....: 08/17/09 **Analysis Time..:** 08:01
Analysis Date..: 08/27/09 **Prep Batch #...:** 9229209
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	71	(28 - 101)
Fluorene d-10	59	(23 - 84)
Naphthalene-d8	78	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH83G1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9H160000-018 LH83G1AD-LCSD
Prep Date.....: 08/16/09 Analysis Date..: 08/27/09
Prep Batch #...: 9228018 Analysis Time..: 10:17
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	52	(30 - 150)			SW846 8270C SIM
	76	(30 - 150)	38	(0-50)	SW846 8270C SIM
Acenaphthylene	44	(30 - 150)			SW846 8270C SIM
	66	(30 - 150)	41	(0-50)	SW846 8270C SIM
Acridine	0.0	(30 - 150)			SW846 8270C SIM
	26 a,p	(30 - 150)	200	(0-50)	SW846 8270C SIM
Anthracene	33	(30 - 150)			SW846 8270C SIM
	57 p	(30 - 150)	53	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	46	(30 - 150)			SW846 8270C SIM
	74	(30 - 150)	48	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	49	(30 - 150)			SW846 8270C SIM
	87 p	(30 - 150)	56	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	41	(30 - 150)			SW846 8270C SIM
	69 p	(30 - 150)	51	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	43	(30 - 150)			SW846 8270C SIM
	66	(30 - 150)	43	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	29 a	(30 - 150)			SW846 8270C SIM
	74 p	(30 - 150)	89	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	5.6 a	(30 - 150)			SW846 8270C SIM
	42 p	(30 - 150)	153	(0-50)	SW846 8270C SIM
2,3-Benzofuran	51	(30 - 150)			SW846 8270C SIM
	73	(30 - 150)	36	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	42	(30 - 150)			SW846 8270C SIM
	75 p	(30 - 150)	57	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	28 a	(30 - 150)			SW846 8270C SIM
	61 p	(30 - 150)	74	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	15 a	(30 - 150)			SW846 8270C SIM
	53 p	(30 - 150)	110	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	0.0	(30 - 150)			SW846 8270C SIM
	0.0	(30 - 150)	0.0	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	17 a	(30 - 150)			SW846 8270C SIM
	45 p	(30 - 150)	91	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	28 a	(30 - 150)			SW846 8270C SIM
	60 p	(30 - 150)	75	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	9.5 a	(30 - 150)			SW846 8270C SIM
	37 p	(30 - 150)	119	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	49	(30 - 150)			SW846 8270C SIM
	70	(30 - 150)	36	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH83G1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9H160000-018 LH83G1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	48	(37 - 105)			SW846 8270C SIM
	78	(37 - 105)	47	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	55	(30 - 150)			SW846 8270C SIM
	79	(30 - 150)	36	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	0.0	(30 - 150)			SW846 8270C SIM
	0.0	(30 - 150)	0.0	(0-50)	SW846 8270C SIM
6-Methylchrysene	41	(30 - 150)			SW846 8270C SIM
	66	(30 - 150)	47	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	44	(30 - 150)			SW846 8270C SIM
	67	(30 - 150)	40	(0-50)	SW846 8270C SIM
Biphenyl	52	(30 - 150)			SW846 8270C SIM
	75	(30 - 150)	36	(0-50)	SW846 8270C SIM
Carbazole	42	(30 - 150)			SW846 8270C SIM
	66	(30 - 150)	46	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	43	(30 - 150)			SW846 8270C SIM
	62	(30 - 150)	37	(0-50)	SW846 8270C SIM
Chrysene	49	(20 - 136)			SW846 8270C SIM
	74	(20 - 136)	42	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	36	(30 - 150)			SW846 8270C SIM
	73 p	(30 - 150)	69	(0-50)	SW846 8270C SIM
Dibenzofuran	51	(30 - 150)			SW846 8270C SIM
	75	(30 - 150)	38	(0-50)	SW846 8270C SIM
Dibenzothiophene	46	(30 - 150)			SW846 8270C SIM
	69	(30 - 150)	40	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	68	(30 - 150)			SW846 8270C SIM
	75	(30 - 150)	11	(0-50)	SW846 8270C SIM
Fluoranthene	44	(30 - 150)			SW846 8270C SIM
	68	(30 - 150)	44	(0-50)	SW846 8270C SIM
Fluorene	45	(34 - 96)			SW846 8270C SIM
	66	(34 - 96)	39	(0-50)	SW846 8270C SIM
Indene	48	(22 - 86)			SW846 8270C SIM
	70	(22 - 86)	38	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	37	(30 - 150)			SW846 8270C SIM
	73 p	(30 - 150)	66	(0-50)	SW846 8270C SIM
Indole	36	(30 - 150)			SW846 8270C SIM
	61 p	(30 - 150)	51	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	50	(25 - 95)			SW846 8270C SIM
	72	(25 - 95)	36	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	52	(30 - 150)			SW846 8270C SIM
	77	(30 - 150)	39	(0-50)	SW846 8270C SIM
Naphthalene	86	(27 - 95)			SW846 8270C SIM
	87	(27 - 95)	1.2	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH83G1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9H160000-018 LH83G1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**36**	**(30 - 150)**			**SW846 8270C SIM**
	66 p	**(30 - 150)**	**58**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**49**	**(30 - 150)**			**SW846 8270C SIM**
	72	**(30 - 150)**	**39**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**43**	**(30 - 150)**			**SW846 8270C SIM**
	67	**(30 - 150)**	**44**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**10 a**	**(20 - 112)**			**SW846 8270C SIM**
	88 p	**(20 - 112)**	**158**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	53	(28 - 101)
	76	(28 - 101)
Fluorene d-10	40	(23 - 84)
	58	(23 - 84)
Naphthalene-d8	52	(22 - 97)
	75	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH83G1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9H160000-018 LH83G1AD-LCSD
Prep Date.....: 08/16/09 Analysis Date..: 08/27/09
Prep Batch #...: 9228018 Analysis Time..: 10:17
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	75.0	38.7	ng/L	52		SW846 8270C SIM
	75.0	56.8	ng/L	76	38	SW846 8270C SIM
Acenaphthylene	75.0	32.9	ng/L	44		SW846 8270C SIM
	75.0	49.7	ng/L	66	41	SW846 8270C SIM
Acridine	75.0		ng/L	0.0		SW846 8270C SIM
	75.0	19.4 a,p	ng/L	26	200	SW846 8270C SIM
Anthracene	75.0	24.9	ng/L	33		SW846 8270C SIM
	75.0	43.0 p	ng/L	57	53	SW846 8270C SIM
Benzo(a)anthracene	75.0	34.2	ng/L	46		SW846 8270C SIM
	75.0	55.7	ng/L	74	48	SW846 8270C SIM
Benzo(b)fluoranthene	75.0	36.8	ng/L	49		SW846 8270C SIM
	75.0	65.3 p	ng/L	87	56	SW846 8270C SIM
Benzo(k)fluoranthene	75.0	30.6	ng/L	41		SW846 8270C SIM
	75.0	51.4 p	ng/L	69	51	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	75.0	32.2	ng/L	43		SW846 8270C SIM
	75.0	49.7	ng/L	66	43	SW846 8270C SIM
Dibenz(a,h)acridine	75.0	21.5 a	ng/L	29		SW846 8270C SIM
	75.0	55.6 p	ng/L	74	89	SW846 8270C SIM
Dibenz(a,j)acridine	75.0	4.21 a	ng/L	5.6		SW846 8270C SIM
	75.0	31.4 p	ng/L	42	153	SW846 8270C SIM
2,3-Benzofuran	75.0	38.0	ng/L	51		SW846 8270C SIM
	75.0	54.7	ng/L	73	36	SW846 8270C SIM
Benzo(ghi)perylene	75.0	31.5	ng/L	42		SW846 8270C SIM
	75.0	56.4 p	ng/L	75	57	SW846 8270C SIM
Dibenzo(a,e)pyrene	75.0	21.0 a	ng/L	28		SW846 8270C SIM
	75.0	45.5 p	ng/L	61	74	SW846 8270C SIM
Dibenzo(a,i)pyrene	75.0	11.5 a	ng/L	15		SW846 8270C SIM
	75.0	39.7 p	ng/L	53	110	SW846 8270C SIM
Dibenzo(a,h)pyrene	75.0		ng/L	0.0		SW846 8270C SIM
	75.0		ng/L	0.0	0.0	SW846 8270C SIM
Dibenzo(a,l)pyrene	75.0	12.8 a	ng/L	17		SW846 8270C SIM
	75.0	34.1 p	ng/L	45	91	SW846 8270C SIM
Benzo(a)pyrene	75.0	20.6 a	ng/L	28		SW846 8270C SIM
	75.0	45.3 p	ng/L	60	75	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	75.0	7.12 a	ng/L	9.5		SW846 8270C SIM
	75.0	28.1 p	ng/L	37	119	SW846 8270C SIM
2,6-Dimethylnaphthalene	75.0	36.7	ng/L	49		SW846 8270C SIM
	75.0	52.7	ng/L	70	36	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH83G1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9H160000-018 LH83G1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzo(e)pyrene	75.0	36.2	ng/L	48		SW846 8270C SIM
	75.0	58.7	ng/L	78	47	SW846 8270C SIM
Benzo(b)thiophene	75.0	41.3	ng/L	55		SW846 8270C SIM
	75.0	59.3	ng/L	79	36	SW846 8270C SIM
3-Methylcholanthrene	75.0		ng/L	0.0		SW846 8270C SIM
	75.0		ng/L	0.0	0.0	SW846 8270C SIM
6-Methylchrysene	75.0	30.7	ng/L	41		SW846 8270C SIM
	75.0	49.5	ng/L	66	47	SW846 8270C SIM
1-Methylphenanthrene	75.0	33.2	ng/L	44		SW846 8270C SIM
	75.0	49.9	ng/L	67	40	SW846 8270C SIM
Biphenyl	75.0	38.9	ng/L	52		SW846 8270C SIM
	75.0	56.0	ng/L	75	36	SW846 8270C SIM
Carbazole	75.0	31.2	ng/L	42		SW846 8270C SIM
	75.0	49.7	ng/L	66	46	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	75.0	32.1	ng/L	43		SW846 8270C SIM
	75.0	46.8	ng/L	62	37	SW846 8270C SIM
Chrysene	75.0	36.4	ng/L	49		SW846 8270C SIM
	75.0	55.5	ng/L	74	42	SW846 8270C SIM
Dibenzo(a,h)anthracene	75.0	26.6	ng/L	36		SW846 8270C SIM
	75.0	54.6 p	ng/L	73	69	SW846 8270C SIM
Dibenzofuran	75.0	38.2	ng/L	51		SW846 8270C SIM
	75.0	56.1	ng/L	75	38	SW846 8270C SIM
Dibenzothiophene	75.0	34.8	ng/L	46		SW846 8270C SIM
	75.0	52.0	ng/L	69	40	SW846 8270C SIM
2,3-Dihydroindene	75.0	50.7	ng/L	68		SW846 8270C SIM
	75.0	56.4	ng/L	75	11	SW846 8270C SIM
Fluoranthene	75.0	32.7	ng/L	44		SW846 8270C SIM
	75.0	50.9	ng/L	68	44	SW846 8270C SIM
Fluorene	75.0	33.7	ng/L	45		SW846 8270C SIM
	75.0	49.9	ng/L	66	39	SW846 8270C SIM
Indene	75.0	35.9	ng/L	48		SW846 8270C SIM
	75.0	52.8	ng/L	70	38	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	75.0	27.6	ng/L	37		SW846 8270C SIM
	75.0	54.9 p	ng/L	73	66	SW846 8270C SIM
Indole	75.0	27.3	ng/L	36		SW846 8270C SIM
	75.0	45.9 p	ng/L	61	51	SW846 8270C SIM
2-Methylnaphthalene	75.0	37.6	ng/L	50		SW846 8270C SIM
	75.0	54.4	ng/L	72	36	SW846 8270C SIM
1-Methylnaphthalene	75.0	39.1	ng/L	52		SW846 8270C SIM
	75.0	58.0	ng/L	77	39	SW846 8270C SIM
Naphthalene	75.0	64.4	ng/L	86		SW846 8270C SIM
	75.0	65.2	ng/L	87	1.2	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH83G1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9H160000-018 LH83G1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Perylene	**75.0**	**27.1**	**ng/L**	**36**		**SW846 8270C SIM**
	75.0	**49.5 p**	**ng/L**	**66**	**58**	**SW846 8270C SIM**
Phenanthrene	**75.0**	**36.6**	**ng/L**	**49**		**SW846 8270C SIM**
	75.0	**54.4**	**ng/L**	**72**	**39**	**SW846 8270C SIM**
Pyrene	**75.0**	**32.2**	**ng/L**	**43**		**SW846 8270C SIM**
	75.0	**50.3**	**ng/L**	**67**	**44**	**SW846 8270C SIM**
Quinoline	**75.0**	**7.78 a**	**ng/L**	**10**		**SW846 8270C SIM**
	75.0	**66.3 p**	**ng/L**	**88**	**158**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	53	(28 - 101)
	76	(28 - 101)
Fluorene d-10	40	(23 - 84)
	58	(23 - 84)
Naphthalene-d8	52	(22 - 97)
	75	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH9FH1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9H170000-209 LH9FH1AD-LCSD
Prep Date.....: 08/17/09 Analysis Date..: 08/27/09
Prep Batch #...: 9229209 Analysis Time..: 08:35
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	79	(30 - 150)			SW846 8270C SIM
	30 p	(30 - 150)	92	(0-50)	SW846 8270C SIM
Acenaphthylene	66	(30 - 150)			SW846 8270C SIM
	24 a,p	(30 - 150)	94	(0-50)	SW846 8270C SIM
Acridine	49	(30 - 150)			SW846 8270C SIM
	15 a,p	(30 - 150)	108	(0-50)	SW846 8270C SIM
Anthracene	54	(30 - 150)			SW846 8270C SIM
	22 a,p	(30 - 150)	84	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	80	(30 - 150)			SW846 8270C SIM
	26 a,p	(30 - 150)	102	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	92	(30 - 150)			SW846 8270C SIM
	30 p	(30 - 150)	101	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	72	(30 - 150)			SW846 8270C SIM
	24 a,p	(30 - 150)	100	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	68	(30 - 150)			SW846 8270C SIM
	24 a,p	(30 - 150)	97	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	79	(30 - 150)			SW846 8270C SIM
	25 a,p	(30 - 150)	104	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	63	(30 - 150)			SW846 8270C SIM
	20 a,p	(30 - 150)	104	(0-50)	SW846 8270C SIM
2,3-Benzofuran	81	(30 - 150)			SW846 8270C SIM
	31 p	(30 - 150)	89	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	81	(30 - 150)			SW846 8270C SIM
	28 a,p	(30 - 150)	97	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	68	(30 - 150)			SW846 8270C SIM
	20 a,p	(30 - 150)	110	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	35	(30 - 150)			SW846 8270C SIM
	14 a,p	(30 - 150)	85	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	0.0	(30 - 150)			SW846 8270C SIM
	4.0 a,p	(30 - 150)	200	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	44	(30 - 150)			SW846 8270C SIM
	15 a,p	(30 - 150)	100	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	54	(30 - 150)			SW846 8270C SIM
	21 a,p	(30 - 150)	87	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	30	(30 - 150)			SW846 8270C SIM
	15 a,p	(30 - 150)	67	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	76	(30 - 150)			SW846 8270C SIM
	28 a,p	(30 - 150)	93	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH9FH1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9H170000-209 LH9FH1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	84	(37 - 105)			SW846 8270C SIM
	29 a,p	(37 - 105)	97	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	84	(30 - 150)			SW846 8270C SIM
	32 p	(30 - 150)	89	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	0.0	(30 - 150)			SW846 8270C SIM
	13 a,p	(30 - 150)	200	(0-50)	SW846 8270C SIM
6-Methylchrysene	71	(30 - 150)			SW846 8270C SIM
	24 a,p	(30 - 150)	98	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	72	(30 - 150)			SW846 8270C SIM
	26 a,p	(30 - 150)	94	(0-50)	SW846 8270C SIM
Biphenyl	79	(30 - 150)			SW846 8270C SIM
	30 p	(30 - 150)	91	(0-50)	SW846 8270C SIM
Carbazole	70	(30 - 150)			SW846 8270C SIM
	25 a,p	(30 - 150)	95	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	69	(30 - 150)			SW846 8270C SIM
	25 a,p	(30 - 150)	94	(0-50)	SW846 8270C SIM
Chrysene	78	(20 - 136)			SW846 8270C SIM
	28 p	(20 - 136)	95	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	79	(30 - 150)			SW846 8270C SIM
	25 a,p	(30 - 150)	104	(0-50)	SW846 8270C SIM
Dibenzofuran	79	(30 - 150)			SW846 8270C SIM
	29 a,p	(30 - 150)	92	(0-50)	SW846 8270C SIM
Dibenzothiophene	75	(30 - 150)			SW846 8270C SIM
	28 a,p	(30 - 150)	91	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	81	(30 - 150)			SW846 8270C SIM
	30 p	(30 - 150)	92	(0-50)	SW846 8270C SIM
Fluoranthene	72	(30 - 150)			SW846 8270C SIM
	26 a,p	(30 - 150)	95	(0-50)	SW846 8270C SIM
Fluorene	71	(34 - 96)			SW846 8270C SIM
	26 a,p	(34 - 96)	93	(0-50)	SW846 8270C SIM
Indene	75	(22 - 86)			SW846 8270C SIM
	29 p	(22 - 86)	88	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	76	(30 - 150)			SW846 8270C SIM
	27 a,p	(30 - 150)	97	(0-50)	SW846 8270C SIM
Indole	54	(30 - 150)			SW846 8270C SIM
	26 a,p	(30 - 150)	69	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	77	(25 - 95)			SW846 8270C SIM
	29 p	(25 - 95)	91	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	80	(30 - 150)			SW846 8270C SIM
	30 p	(30 - 150)	90	(0-50)	SW846 8270C SIM
Naphthalene	84	(27 - 95)			SW846 8270C SIM
	30 p	(27 - 95)	95	(0-50)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH9FH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9H170000-209 LH9FH1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**54**	**(30 - 150)**			**SW846 8270C SIM**
	21 a,p	**(30 - 150)**	**89**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**78**	**(30 - 150)**			**SW846 8270C SIM**
	29 a,p	**(30 - 150)**	**90**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**70**	**(30 - 150)**			**SW846 8270C SIM**
	25 a,p	**(30 - 150)**	**95**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**76**	**(20 - 112)**			**SW846 8270C SIM**
	29 p	**(20 - 112)**	**90**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(28 - 101)
	28	(28 - 101)
Fluorene d-10	63	(23 - 84)
	23	(23 - 84)
Naphthalene-d8	79	(22 - 97)
	30	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH9FH1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9H170000-209 LH9FH1AD-LCSD
Prep Date.....: 08/17/09 Analysis Date..: 08/27/09
Prep Batch #...: 9229209 Analysis Time..: 08:35
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT		UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	75.0	59.6		ng/L	79		SW846 8270C SIM
	75.0	22.1	p	ng/L	30	92	SW846 8270C SIM
Acenaphthylene	75.0	49.6		ng/L	66		SW846 8270C SIM
	75.0	18.0	a,p	ng/L	24	94	SW846 8270C SIM
Acridine	75.0	36.4		ng/L	49		SW846 8270C SIM
	75.0	10.9	a,p	ng/L	15	108	SW846 8270C SIM
Anthracene	75.0	40.8		ng/L	54		SW846 8270C SIM
	75.0	16.7	a,p	ng/L	22	84	SW846 8270C SIM
Benzo(a)anthracene	75.0	60.1		ng/L	80		SW846 8270C SIM
	75.0	19.5	a,p	ng/L	26	102	SW846 8270C SIM
Benzo(b)fluoranthene	75.0	69.3		ng/L	92		SW846 8270C SIM
	75.0	22.7	p	ng/L	30	101	SW846 8270C SIM
Benzo(k)fluoranthene	75.0	54.3		ng/L	72		SW846 8270C SIM
	75.0	18.2	a,p	ng/L	24	100	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	75.0	51.4		ng/L	68		SW846 8270C SIM
	75.0	17.8	a,p	ng/L	24	97	SW846 8270C SIM
Dibenz(a,h)acridine	75.0	59.2		ng/L	79		SW846 8270C SIM
	75.0	18.7	a,p	ng/L	25	104	SW846 8270C SIM
Dibenz(a,j)acridine	75.0	47.0		ng/L	63		SW846 8270C SIM
	75.0	15.0	a,p	ng/L	20	104	SW846 8270C SIM
2,3-Benzofuran	75.0	60.4		ng/L	81		SW846 8270C SIM
	75.0	23.3	p	ng/L	31	89	SW846 8270C SIM
Benzo(ghi)perylene	75.0	60.6		ng/L	81		SW846 8270C SIM
	75.0	21.0	a,p	ng/L	28	97	SW846 8270C SIM
Dibenzo(a,e)pyrene	75.0	50.8		ng/L	68		SW846 8270C SIM
	75.0	14.7	a,p	ng/L	20	110	SW846 8270C SIM
Dibenzo(a,i)pyrene	75.0	26.6		ng/L	35		SW846 8270C SIM
	75.0	10.8	a,p	ng/L	14	85	SW846 8270C SIM
Dibenzo(a,h)pyrene	75.0			ng/L	0.0		SW846 8270C SIM
	75.0	3.00	a,p	ng/L	4.0	200	SW846 8270C SIM
Dibenzo(a,l)pyrene	75.0	32.9		ng/L	44		SW846 8270C SIM
	75.0	11.0	a,p	ng/L	15	100	SW846 8270C SIM
Benzo(a)pyrene	75.0	40.4		ng/L	54		SW846 8270C SIM
	75.0	16.0	a,p	ng/L	21	87	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	75.0	22.5		ng/L	30		SW846 8270C SIM
	75.0	11.2	a,p	ng/L	15	67	SW846 8270C SIM
2,6-Dimethylnaphthalene	75.0	56.9		ng/L	76		SW846 8270C SIM
	75.0	20.7	a,p	ng/L	28	93	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 Work Order #...: LH9FH1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9H170000-209 LH9FH1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT		UNITS	PERCENT RECOVERY	RPD	METHOD
Benzo(e)pyrene	75.0	63.2		ng/L	84		SW846 8270C SIM
	75.0	22.0	a,p	ng/L	29	97	SW846 8270C SIM
Benzo(b)thiophene	75.0	62.6		ng/L	84		SW846 8270C SIM
	75.0	24.1	p	ng/L	32	89	SW846 8270C SIM
3-Methylcholanthrene	75.0			ng/L	0.0		SW846 8270C SIM
	75.0	9.80	a,p	ng/L	13	200	SW846 8270C SIM
6-Methylchrysene	75.0	53.2		ng/L	71		SW846 8270C SIM
	75.0	18.2	a,p	ng/L	24	98	SW846 8270C SIM
1-Methylphenanthrene	75.0	54.2		ng/L	72		SW846 8270C SIM
	75.0	19.6	a,p	ng/L	26	94	SW846 8270C SIM
Biphenyl	75.0	59.4		ng/L	79		SW846 8270C SIM
	75.0	22.2	p	ng/L	30	91	SW846 8270C SIM
Carbazole	75.0	52.6		ng/L	70		SW846 8270C SIM
	75.0	18.7	a,p	ng/L	25	95	SW846 8270C SIM
2,3,5-Trimethylnaphthalene	75.0	51.9		ng/L	69		SW846 8270C SIM
	75.0	18.7	a,p	ng/L	25	94	SW846 8270C SIM
Chrysene	75.0	58.7		ng/L	78		SW846 8270C SIM
	75.0	20.9	p	ng/L	28	95	SW846 8270C SIM
Dibenzo(a,h)anthracene	75.0	59.6		ng/L	79		SW846 8270C SIM
	75.0	18.8	a,p	ng/L	25	104	SW846 8270C SIM
Dibenzofuran	75.0	59.3		ng/L	79		SW846 8270C SIM
	75.0	22.0	a,p	ng/L	29	92	SW846 8270C SIM
Dibenzothiophene	75.0	56.6		ng/L	75		SW846 8270C SIM
	75.0	21.3	a,p	ng/L	28	91	SW846 8270C SIM
2,3-Dihydroindene	75.0	60.6		ng/L	81		SW846 8270C SIM
	75.0	22.3	p	ng/L	30	92	SW846 8270C SIM
Fluoranthene	75.0	53.9		ng/L	72		SW846 8270C SIM
	75.0	19.2	a,p	ng/L	26	95	SW846 8270C SIM
Fluorene	75.0	53.6		ng/L	71		SW846 8270C SIM
	75.0	19.6	a,p	ng/L	26	93	SW846 8270C SIM
Indene	75.0	56.2		ng/L	75		SW846 8270C SIM
	75.0	22.0	p	ng/L	29	88	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	75.0	57.3		ng/L	76		SW846 8270C SIM
	75.0	19.9	a,p	ng/L	27	97	SW846 8270C SIM
Indole	75.0	40.1		ng/L	54		SW846 8270C SIM
	75.0	19.6	a,p	ng/L	26	69	SW846 8270C SIM
2-Methylnaphthalene	75.0	57.9		ng/L	77		SW846 8270C SIM
	75.0	21.7	p	ng/L	29	91	SW846 8270C SIM
1-Methylnaphthalene	75.0	59.9		ng/L	80		SW846 8270C SIM
	75.0	22.8	p	ng/L	30	90	SW846 8270C SIM
Naphthalene	75.0	62.8		ng/L	84		SW846 8270C SIM
	75.0	22.2	p	ng/L	30	95	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9H130327 **Work Order #...:** LH9FH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9H170000-209 LH9FH1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Perylene	**75.0**	**40.3**	**ng/L**	**54**		**SW846 8270C SIM**
	75.0	**15.5 a,p**	**ng/L**	**21**	**89**	**SW846 8270C SIM**
Phenanthrene	**75.0**	**58.5**	**ng/L**	**78**		**SW846 8270C SIM**
	75.0	**22.1 a,p**	**ng/L**	**29**	**90**	**SW846 8270C SIM**
Pyrene	**75.0**	**52.6**	**ng/L**	**70**		**SW846 8270C SIM**
	75.0	**18.7 a,p**	**ng/L**	**25**	**95**	**SW846 8270C SIM**
Quinoline	**75.0**	**57.2**	**ng/L**	**76**		**SW846 8270C SIM**
	75.0	**21.8 p**	**ng/L**	**29**	**90**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	80	(28 - 101)
	28	(28 - 101)
Fluorene d-10	63	(23 - 84)
	23	(23 - 84)
Naphthalene-d8	79	(22 - 97)
	30	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

4.2 3.9
4.4 3.5
3.0 2.4
4.6

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/12/09	115111
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa V	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH 5-PAH	Acid fraction	Special Instructions/ Conditions of Receipt
W122-081209	8/12/09	1510		X			6						X		
W133-081209		1530													
W412-081209		1305													
W412D-081209		1310													
W412FB-081209		1315													
W412FBD-081209		1320													
W119-081209		1030													
SLP4T-081209		0820												X	
SLP10T-081209		0920													
SLP10TD-081209		0925													
SLP10TFB-081209		0930													
SLP10TFBD-081209		0935													

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By	8/13/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
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TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	8/12/09	115112
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 2**
3752 Wooddale Ave	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416		Lisa V.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH PPTS	Acid fraction	Special Instructions/ Conditions of Receipt
SLP10TMS-081209	8/12/09	0930		X			6							X	
SLP10TMSD-081209	↓	0935		↓			↓							X	
W411-081209	↓	1115		↓			↓						X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By			1. Received By	8/13/9	0900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AECOM

AECOM Environment
FNBB 332 Minnesota Street Suite E1000 St. Paul, MN 55101
T 651.222.0841 F 651.222.8914 www.aecom.com

Memorandum

Date: March 10, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPT PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9H130327
Appendix M

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of nine aqueous samples and four field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C SIM. The samples were collected on August 12, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9H130327.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W122-081209	W133-081209
W412-081209	W412D-081209
W412FB-081209	W412FBD-081209
SLP4T-081209	SLP10T-081209
SLP10TD-081209	SLP10TFB-081209
SLP10TFBD-081209	W119-081209

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Sample IDs	Sample IDs
W411-081209	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The COC was not relinquished by the sampling team. Additionally, one sample cooler was not delivered with the rest of the group due to a shipping error. The cooler arrived the next day and all samples were accounted for.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blanks 9226256 or 9229209. Method blank 9228018 had concentrations of Naphthalene detected at low levels. No action was taken, as it did not exceed the reporting limit. The field blanks W412FB-081209 and W412FBD-081209 had concentrations of naphthalene, 2-Methylnaphthalene, and 2,3-Dihydroindene (FB only) detected below the reporting limit. As none of the detected concentrations exceeded the ALs, no action was taken.

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses with the exception of five samples. The surrogate percent recovery outside (below) the acceptance

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criteria was chrysene-d12 in each case. No action was required since the remaining two base/neutral surrogates were within QC recovery limits.

MS/MSD Results

MS/MSD analyses were performed on sample SLP10T-081209. All target compounds were spiked for the MS/MSD analyses. All spiked parameters were within the QC control limits.

LCS Results

Two LCS analyses (9228018 and 9229209) exhibited numerous compounds outside of the QC control limits. Since one LCS completed with this data set was in control, no actions were taken.

Field Duplicate Results

Samples W412-081209 and W412D-081209 were the field duplicate pairs analyzed with this data set.

A total of 16 of 31 compounds were detected. All RPDs were within the acceptance criteria.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

No sample dilutions were required for this set of data.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within $\pm$ 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this $\pm$ 20% rule.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

City of St. Louis Park

Project: Reilly Tar & Chemical Corporation

Lot #: D9K110561

Mr. Scott Anderson

City of St. Louis Park
Utility Division
3752 Wooddale Avenue
St. Louis Park, MN 55416

TestAmerica Laboratories, Inc.

Lisa B. Uriell
Project Manager

December 7, 2009

CASE NARRATIVE
D9K110561

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

A project-specific lower acceptable recovery limit of 30% for all QC samples and surrogates has been designated for analytical work performed under the 2008 QAPP for the Reilly Industries, Inc. NPL Site. This lower limit is used for this project, rather than historically generated lower recovery limits. All recoveries in this report are above the 30% minimum threshold.

Sample Receiving

Eleven samples plus two sets of MS/MSD samples were received under chain of custody on November 11, 2009. The samples were received at temperatures of 3.6°C, 2.3°C, 2.9°C, 4.9°C, 4.1°C and 2.8°C. All sample containers were received in acceptable condition.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

Samples W420-111009, W420D-111009 and W421-111009 were analyzed at two different dilutions to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Surrogate recoveries could not be calculated for the analyses performed at a 20X dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

The LCSD recoveries associated with QC batch 9318112 were within the QC control limits; however, the LCS exhibited a percent recovery slightly below the QC control limits for 2-Methylnaphthalene at 44% (limits 47-138%). The acceptable LCSD analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines; therefore, corrective action is deemed unnecessary.

The MS/MSD associated with QC batch 9318112 was performed using sample W420-111009, as requested. MS/MSD exhibited 5 of the 44 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 4 of the 44 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited 13 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

Acenaphthene	2,3-Dihydroindene
2-Methylnaphthalene	1-Methylnaphthalene
Naphthalene	

No other anomalies were noted.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Samples SLP4T-111009, SLP4TD-111009 and SLP4TFBD-111009 exhibited surrogate recoveries outside the QC control limits. Upon re-aliquoting and reanalyzing, the surrogate recovery outliers were still present, demonstrating that this anomaly is most likely due to matrix interference. Therefore, corrective action is deemed unnecessary. Re-extraction was not possible due to insufficient remaining sample volume.

Surrogate Chrysene-d12 was recovered above the QC control limits in the method blank associated with QC batch 9319014 at 112% (limits 28-101%). This is an indicator that data may be biased high. As no detectable concentrations are present in the associated method blank corrective action is deemed unnecessary.

The LCS associated with QC batch 9319014 exhibited recoveries outside the control limits for Acridine, Dibenz(a,j)acridine and Dibenzo(a,i)pyrene. Details of the specific analyte recoveries can found in the Laboratory Control Sample Evaluation and Data Reports. Analytes Dibenz(a,j)acridine and Dibenzo(a,h)pyrene are not compounds of interest for this project; therefore, corrective action was deemed unnecessary. The LCS was reanalyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume.

The MS/MSD associated with QC batch 9319014 was performed using sample SLP4T-111009, as requested. MS/MSD exhibited 17 of the 44 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 18 of the 44 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited 4 of the 44 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries and/or relative percent difference data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Evaluation and Data Reports.

Benzo(b)fluoranthene	Benzo(k)fluoranthene	7H-Dibenzo[c,g]carbazole
Dibenz(a,h)acridine	Dibenz(a,j)acridine	Benzo(ghi)perylene
Dibenzo(a,e)pyrene	Dibenzo(a,i)pyrene	Dibenzo(a,h)pyrene
Dibenzo(a,l),pyrene	Benzo(a)pyrene	7,12-Dimethylbenz(a)anthracene
Benzo(e)pyrene	3-Methylcholanthrene	6-Methylchrysene
Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Perylene

No other anomalies were noted.

Data Completeness for Method 8270C

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
LOT: D9K110561
ANALYSIS: SW846-8270C

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS/LCSD	14	13
LCS/LCSD Surrogates	6	6
FB/FBD	62	62
MS	7	5
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	15	15
Samples and QC Internal Standard Area	27	27
TOTAL	**216**	**212**
% Completeness	**98.1%**	

Sample Duplicate Calculation for Method 8270C

Sample Duplicate RPD					
LOT D9K110561					
Sample: W420-111009		DUP: W420D-111009			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	150	Acenaphthene	120	22.2	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	1.9	NC	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	31	2,3-Benzofuran	22	34.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	120	Benzo(b)thiophene	88	30.8	
Biphenyl	19	Biphenyl	13	37.5	
Carbazole	91	Carbazole	68	28.9	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	57	Dibenzofuran	41	32.7	
Dibenzothiophene	15	Dibenzothiophene	10	40.0	
2,3-Dihydroindene	260	2,3-Dihydroindene	180	36.4	
Fluoranthene	1.4	Fluoranthene	1.0	33.3	
Fluorene	62	Fluorene	45	31.8	
Indene	26	Indene	19	31.1	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	150	2-Methylnaphthalene	110	30.8	
1-Methylnaphthalene	160	1-Methylnaphthalene	120	28.6	
Naphthalene	2300	Naphthalene	1600	35.9	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	48	Phenanthrene	34	34.1	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION LOT: D9K110561 ANALYSIS: SW846-8270C SIM		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	33	33
MB Surrogates	3	2
LCS	7	7
LCS Surrogates	3	3
FB/FBD	62	60
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	18	14
Samples and QC Internal Standard Area	30	30
TOTAL	**214**	**205**
% Completeness	**95.8%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
LOT D9K110561					
Sample: SLP4T-111009		DUP: SLP4TD-111009			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	ND	Acenaphthene	ND	0.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	1.3	Chrysene	ND	NC	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	ND	2,3-Dihydroindene	ND	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	1.6	Naphthalene	1.5	6.5	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

EXECUTIVE SUMMARY - Detection Highlights

D9K110561

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W420-111009 11/10/09 10:40 001				
Acenaphthene	150 J	200	ug/L	SW846 8270C
2,3-Benzofuran	31	10	ug/L	SW846 8270C
Benzo(b)thiophene	120	10	ug/L	SW846 8270C
Biphenyl	19	10	ug/L	SW846 8270C
Carbazole	91	10	ug/L	SW846 8270C
Dibenzofuran	57	10	ug/L	SW846 8270C
Dibenzothiophene	15	10	ug/L	SW846 8270C
2,3-Dihydroindene	260	200	ug/L	SW846 8270C
Fluoranthene	1.4 J	10	ug/L	SW846 8270C
Fluorene	62	10	ug/L	SW846 8270C
Indene	26	10	ug/L	SW846 8270C
2-Methylnaphthalene	150	10	ug/L	SW846 8270C
1-Methylnaphthalene	160 J	200	ug/L	SW846 8270C
Naphthalene	2300	200	ug/L	SW846 8270C
Phenanthrene	48	10	ug/L	SW846 8270C
W420D-111009 11/10/09 10:45 002				
Acenaphthene	120	10	ug/L	SW846 8270C
Anthracene	1.9 J	10	ug/L	SW846 8270C
2,3-Benzofuran	22	10	ug/L	SW846 8270C
Benzo(b)thiophene	88	10	ug/L	SW846 8270C
Biphenyl	13	10	ug/L	SW846 8270C
Carbazole	68	10	ug/L	SW846 8270C
Dibenzofuran	41	10	ug/L	SW846 8270C
Dibenzothiophene	10	10	ug/L	SW846 8270C
2,3-Dihydroindene	180 J	200	ug/L	SW846 8270C
Fluoranthene	1.0 J	10	ug/L	SW846 8270C
Fluorene	45	10	ug/L	SW846 8270C
Indene	19	10	ug/L	SW846 8270C
2-Methylnaphthalene	110	10	ug/L	SW846 8270C
1-Methylnaphthalene	120	10	ug/L	SW846 8270C
Naphthalene	1600	200	ug/L	SW846 8270C
Phenanthrene	34	10	ug/L	SW846 8270C
W421-111009 11/10/09 11:00 005				
Acenaphthene	160	40	ug/L	SW846 8270C
Acenaphthylene	1.8 J	10	ug/L	SW846 8270C
Acridine	7.0 J	10	ug/L	SW846 8270C
Anthracene	35	10	ug/L	SW846 8270C
Benzo(a)anthracene	43	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	35	10	ug/L	SW846 8270C

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9K110561

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
W421-111009 11/10/09 11:00 005				
Benzo(k)fluoranthene	14	10	ug/L	SW846 8270C
Benzo(ghi)perylene	11	10	ug/L	SW846 8270C
Benzo(a)pyrene	24	10	ug/L	SW846 8270C
Benzo(e)pyrene	17	10	ug/L	SW846 8270C
Benzo(b)thiophene	36	10	ug/L	SW846 8270C
Biphenyl	14	10	ug/L	SW846 8270C
Carbazole	51	10	ug/L	SW846 8270C
Chrysene	32	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	2.7 J	10	ug/L	SW846 8270C
Dibenzofuran	61	10	ug/L	SW846 8270C
Dibenzothiophene	21	10	ug/L	SW846 8270C
2,3-Dihydroindene	130	10	ug/L	SW846 8270C
Fluoranthene	160	40	ug/L	SW846 8270C
Fluorene	100	10	ug/L	SW846 8270C
Indene	39	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	8.9 J	10	ug/L	SW846 8270C
2-Methylnaphthalene	52	10	ug/L	SW846 8270C
1-Methylnaphthalene	110	10	ug/L	SW846 8270C
Naphthalene	340	40	ug/L	SW846 8270C
Perylene	6.1 J	10	ug/L	SW846 8270C
Phenanthrene	270	40	ug/L	SW846 8270C
Pyrene	120	10	ug/L	SW846 8270C
W48-111009 11/10/09 11:05 006				
Acenaphthene	120	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	4.4 J	4.8	ng/L	SW846 8270C SIM
Acridine	7.6	6.5	ng/L	SW846 8270C SIM
Anthracene	6.2	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	0.97 J	4.3	ng/L	SW846 8270C SIM
2,3-Benzofuran	1.3 J	5.4	ng/L	SW846 8270C SIM
Benzo(b)thiophene	12	5.2	ng/L	SW846 8270C SIM
Carbazole	1.9 J	3.8	ng/L	SW846 8270C SIM
Dibenzofuran	0.99 J	5.7	ng/L	SW846 8270C SIM
2,3-Dihydroindene	5.9	5.0	ng/L	SW846 8270C SIM
Indene	45	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	4.8 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	4.3 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	6.3 J	8.6	ng/L	SW846 8270C SIM
Pyrene	4.7	4.2	ng/L	SW846 8270C SIM

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9K110561

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SLP6-111009 11/10/09 09:30 007				
Acenaphthene	88	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	12	4.8	ng/L	SW846 8270C SIM
Acridine	14	6.5	ng/L	SW846 8270C SIM
Anthracene	2.7 J	4.2	ng/L	SW846 8270C SIM
Benzo(b)thiophene	10	5.2	ng/L	SW846 8270C SIM
Carbazole	2.4 J	3.8	ng/L	SW846 8270C SIM
Dibenzothiophene	1.9 J	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	60	5.0	ng/L	SW846 8270C SIM
Fluoranthene	5.6	4.6	ng/L	SW846 8270C SIM
Indene	5.9	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	0.98 J	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	1.6 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	3.9 J	8.6	ng/L	SW846 8270C SIM
Pyrene	3.8 J	4.2	ng/L	SW846 8270C SIM
SLP4T-111009 11/10/09 12:30 008				
Chrysene	1.3 J	5.6	ng/L	SW846 8270C SIM
Naphthalene	1.6 J	8.6	ng/L	SW846 8270C SIM
SLP4TD-111009 11/10/09 12:35 009				
Naphthalene	1.5 J	8.6	ng/L	SW846 8270C SIM
SLP4TFB-111009 11/10/09 12:20 010				
Benzo(a)anthracene	2.5 J	4.3	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	2.8 J	4.1	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	2.8 J	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	2.4 J	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	2.2 J	4.3	ng/L	SW846 8270C SIM
Chrysene	5.8	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	3.7 J	5.9	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	2.6 J	5.4	ng/L	SW846 8270C SIM
Naphthalene	2.2 J	8.6	ng/L	SW846 8270C SIM
Perylene	5.4	3.8	ng/L	SW846 8270C SIM
SLP4TFBD-111009 11/10/09 12:25 011				
Benzo(a)anthracene	1.4 J	4.3	ng/L	SW846 8270C SIM
Chrysene	2.7 J	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	1.5 J	5.9	ng/L	SW846 8270C SIM
Naphthalene	1.6 J	8.6	ng/L	SW846 8270C SIM

METHODS SUMMARY

D9K110561

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Base/Neutrals and Acids	SW846 8270C SIM	SW846 3520C
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3520C

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9K110561

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8270C	Ashley Wolfe	004211
SW846 8270C SIM	Ashley Wolfe	004211

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9K110561

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LN9DL	001	W420-111009	11/10/09	10:40
LN9DR	002	W420D-111009	11/10/09	10:45
LN9DW	003	W420FB-111009	11/10/09	10:30
LN9DX	004	W420FBD-111009	11/10/09	10:35
LN9D2	005	W421-111009	11/10/09	11:00
LN9D8	006	W48-111009	11/10/09	11:05
LN9EM	007	SLP6-111009	11/10/09	09:30
LN9EN	008	SLP4T-111009	11/10/09	12:30
LN9EQ	009	SLP4TD-111009	11/10/09	12:35
LN9ER	010	SLP4TFB-111009	11/10/09	12:20
LN9EV	011	SLP4TFBD-111009	11/10/09	12:25

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

City of Saint Louis Park

Client Sample ID: W420-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-001	**Work Order #...:** LN9DL1AA	**Matrix.....:** WG
Date Sampled...: 11/10/09	**Date Received..:** 11/11/09	
Prep Date.....: 11/14/09	**Analysis Date..:** 11/19/09	
Prep Batch #...: 9318112	**Analysis Time..:** 16:09	
Dilution Factor: 1		
	Method.....: SW846 8270C	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	**31**	**10**	**ug/L**
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**120**	**10**	**ug/L**
Biphenyl	**19**	**10**	**ug/L**
Carbazole	**91**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**57**	**10**	**ug/L**
Dibenzothiophene	**15**	**10**	**ug/L**
Fluoranthene	**1.4 J**	**10**	**ug/L**
Fluorene	**62**	**10**	**ug/L**
Indene	**26**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**150**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**48**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	73	(30 - 160)
Fluorene d-10	94	(36 - 127)
Naphthalene-d8	79	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-001	**Work Order #...:** LN9DL2AA		**Matrix.....:** WG
Date Sampled...: 11/10/09	**Date Received..:** 11/11/09		
Prep Date.....: 11/14/09	**Analysis Date..:** 11/20/09		
Prep Batch #...: 9318112	**Analysis Time..:** 08:25		
Dilution Factor: 20			
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**150 J**	**200**	**ug/L**
2,3-Dihydroindene	**260**	**200**	**ug/L**
1-Methylnaphthalene	**160 J**	**200**	**ug/L**
Naphthalene	**2300**	**200**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420D-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-002	**Work Order #...:** LN9DR1AA	**Matrix.....:** WG
Date Sampled...: 11/10/09	**Date Received..:** 11/11/09	
Prep Date.....: 11/14/09	**Analysis Date..:** 11/19/09	
Prep Batch #...: 9318112	**Analysis Time..:** 17:57	
Dilution Factor: 1		
	Method.....: SW846 8270C	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**120**	**10**	**ug/L**
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	**1.9 J**	**10**	**ug/L**
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	**22**	**10**	**ug/L**
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	**88**	**10**	**ug/L**
Biphenyl	**13**	**10**	**ug/L**
Carbazole	**68**	**10**	**ug/L**
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	**41**	**10**	**ug/L**
Dibenzothiophene	**10**	**10**	**ug/L**
Fluoranthene	**1.0 J**	**10**	**ug/L**
Fluorene	**45**	**10**	**ug/L**
Indene	**19**	**10**	**ug/L**
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	**110**	**10**	**ug/L**
1-Methylnaphthalene	**120**	**10**	**ug/L**
Perylene	ND	10	ug/L
Phenanthrene	**34**	**10**	**ug/L**
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	31	(30 - 160)
Fluorene d-10	68	(36 - 127)
Naphthalene-d8	58	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420D-111009

GC/MS Semivolatiles

Lot-Sample #...:	D9K110561-002	**Work Order #...:**	LN9DR2AA	**Matrix.....:**	WG
Date Sampled...:	11/10/09	**Date Received..:**	11/11/09		
Prep Date.....:	11/14/09	**Analysis Date..:**	11/20/09		
Prep Batch #...:	9318112	**Analysis Time..:**	09:01		
Dilution Factor:	20				
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,3-Dihydroindene	**180 J**	**200**	**ug/L**
Naphthalene	**1600**	**200**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	0.0 DIL	(30 - 160)
Fluorene d-10	0.0 DIL	(36 - 127)
Naphthalene-d8	0.0 DIL	(37 - 107)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W420FB-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-003 **Work Order #...:** LN9DW1AA **Matrix.....:** WG
Date Sampled...: 11/10/09 **Date Received..:** 11/11/09
Prep Date.....: 11/14/09 **Analysis Date..:** 11/19/09
Prep Batch #...: 9318112 **Analysis Time..:** 18:33
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	101	(30 - 160)
Fluorene d-10	89	(36 - 127)
Naphthalene-d8	87	(37 - 107)

City of Saint Louis Park

Client Sample ID: W420FBD-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-004 **Work Order #...:** LN9DX1AA **Matrix.....:** WG
Date Sampled...: 11/10/09 **Date Received..:** 11/11/09
Prep Date.....: 11/14/09 **Analysis Date..:** 11/19/09
Prep Batch #...: 9318112 **Analysis Time..:** 19:08
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acridine	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(e)pyrene	ND	10	ug/L
Benzo(b)thiophene	ND	10	ug/L
Biphenyl	ND	10	ug/L
Carbazole	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenzo(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Dibenzothiophene	ND	10	ug/L
2,3-Dihydroindene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Indene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
1-Methylnaphthalene	ND	10	ug/L
Naphthalene	ND	10	ug/L
Perylene	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Pyrene	ND	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	90	(30 - 160)
Fluorene d-10	81	(36 - 127)
Naphthalene-d8	78	(37 - 107)

City of Saint Louis Park

Client Sample ID: W421-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-005 Work Order #...: LN9D21AA Matrix.....: WG
Date Sampled...: 11/10/09 Date Received..: 11/11/09
Prep Date.....: 11/14/09 Analysis Date..: 11/19/09
Prep Batch #...: 9318112 Analysis Time..: 19:44
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthylene	1.8 J	10	ug/L
Acridine	7.0 J	10	ug/L
Anthracene	35	10	ug/L
Benzo(a)anthracene	43	10	ug/L
Benzo(b)fluoranthene	35	10	ug/L
Benzo(k)fluoranthene	14	10	ug/L
2,3-Benzofuran	ND	10	ug/L
Benzo(ghi)perylene	11	10	ug/L
Benzo(a)pyrene	24	10	ug/L
Benzo(e)pyrene	17	10	ug/L
Benzo(b)thiophene	36	10	ug/L
Biphenyl	14	10	ug/L
Carbazole	51	10	ug/L
Chrysene	32	10	ug/L
Dibenzo(a,h)anthracene	2.7 J	10	ug/L
Dibenzofuran	61	10	ug/L
Dibenzothiophene	21	10	ug/L
2,3-Dihydroindene	130	10	ug/L
Fluorene	100	10	ug/L
Indene	39	10	ug/L
Indeno(1,2,3-cd)pyrene	8.9 J	10	ug/L
Indole	ND	10	ug/L
2-Methylnaphthalene	52	10	ug/L
1-Methylnaphthalene	110	10	ug/L
Perylene	6.1 J	10	ug/L
Pyrene	120	10	ug/L
Quinoline	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	97	(30 - 160)
Fluorene d-10	94	(36 - 127)
Naphthalene-d8	81	(37 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: W421-111009

GC/MS Semivolatiles

Lot-Sample #...:	D9K110561-005	**Work Order #...:**	LN9D22AA	**Matrix.....:**	WG
Date Sampled...:	11/10/09	**Date Received..:**	11/11/09		
Prep Date.....:	11/14/09	**Analysis Date..:**	11/20/09		
Prep Batch #...:	9318112	**Analysis Time..:**	09:38		
Dilution Factor:	4				
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**160**	**40**	**ug/L**
Fluoranthene	**160**	**40**	**ug/L**
Naphthalene	**340**	**40**	**ug/L**
Phenanthrene	**270**	**40**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	95	(30 - 160)
Fluorene d-10	92	(36 - 127)
Naphthalene-d8	77	(37 - 107)

City of Saint Louis Park

Client Sample ID: W48-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-006 Work Order #...: LN9D81AA Matrix.....: WG
Date Sampled...: 11/10/09 Date Received..: 11/11/09
Prep Date.....: 11/15/09 Analysis Date..: 12/02/09
Prep Batch #...: 9319014 Analysis Time..: 16:22
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**120**	**5.7**	**ng/L**
Acenaphthylene	**4.4 J**	**4.8**	**ng/L**
Acridine	**7.6**	**6.5**	**ng/L**
Anthracene	**6.2**	**4.2**	**ng/L**
Benzo(a)anthracene	**0.97 J**	**4.3**	**ng/L**
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	**1.3 J**	**5.4**	**ng/L**
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**12**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**1.9 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	**0.99 J**	**5.7**	**ng/L**
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	**5.9**	**5.0**	**ng/L**
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	**45**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**4.8 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**4.3 J**	**5.6**	**ng/L**
Naphthalene	**6.3 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**4.7**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	34	(28 - 101)
Fluorene d-10	83	(23 - 84)
Naphthalene-d8	76	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP6-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-007 Work Order #...: LN9EM1AA Matrix.....: WG
Date Sampled...: 11/10/09 Date Received..: 11/11/09
Prep Date.....: 11/15/09 Analysis Date..: 12/02/09
Prep Batch #...: 9319014 Analysis Time..: 16:57
Dilution Factor: 1
Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	**88**	**5.7**	**ng/L**
Acenaphthylene	**12**	**4.8**	**ng/L**
Acridine	**14**	**6.5**	**ng/L**
Anthracene	**2.7 J**	**4.2**	**ng/L**
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	**10**	**5.2**	**ng/L**
Biphenyl	ND	5.6	ng/L
Carbazole	**2.4 J**	**3.8**	**ng/L**
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	**1.9 J**	**4.1**	**ng/L**
2,3-Dihydroindene	**60**	**5.0**	**ng/L**
Fluoranthene	**5.6**	**4.6**	**ng/L**
Fluorene	ND	4.1	ng/L
Indene	**5.9**	**4.7**	**ng/L**
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	**0.98 J**	**5.9**	**ng/L**
1-Methylnaphthalene	**1.6 J**	**5.6**	**ng/L**
Naphthalene	**3.9 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	**3.8 J**	**4.2**	**ng/L**
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	31	(28 - 101)
Fluorene d-10	75	(23 - 84)
Naphthalene-d8	72	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP4T-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-008 **Work Order #...:** LN9EN1AA **Matrix.....:** WG
Date Sampled...: 11/10/09 **Date Received..:** 11/11/09
Prep Date.....: 11/15/09 **Analysis Date..:** 12/02/09
Prep Batch #...: 9319014 **Analysis Time..:** 17:33
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	**1.3 J**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.6 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	17 *	(28 - 101)
Fluorene d-10	62	(23 - 84)
Naphthalene-d8	70	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP4TD-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-009 **Work Order #...:** LN9EQ1AA **Matrix.....:** WG
Date Sampled...: 11/10/09 **Date Received..:** 11/11/09
Prep Date.....: 11/15/09 **Analysis Date..:** 12/02/09
Prep Batch #...: 9319014 **Analysis Time..:** 19:21
Dilution Factor: 1

Method.....: SW846 8270C SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	ND	4.3	ng/L
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	ND	5.6	ng/L
Dibenzo(a,h)anthracene	ND	5.9	ng/L
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.5 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	45	(28 - 101)
Fluorene d-10	90 *	(23 - 84)
Naphthalene-d8	98 *	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP4TFB-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-010	**Work Order #...:** LN9ER1AA	**Matrix.....:** WG
Date Sampled...: 11/10/09	**Date Received..:** 11/11/09	
Prep Date.....: 11/15/09	**Analysis Date..:** 12/02/09	
Prep Batch #...: 9319014	**Analysis Time..:** 19:57	
Dilution Factor: 1		
	Method.....: SW846 8270C SIM	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	**2.5 J**	**4.3**	**ng/L**
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	**2.8 J**	**4.1**	**ng/L**
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	**2.8 J**	**6.2**	**ng/L**
Benzo(a)pyrene	**2.4 J**	**2.5**	**ng/L**
Benzo(e)pyrene	**2.2 J**	**4.3**	**ng/L**
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	**5.8**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	**3.7 J**	**5.9**	**ng/L**
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	**2.6 J**	**5.4**	**ng/L**
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**2.2 J**	**8.6**	**ng/L**
Perylene	**5.4**	**3.8**	**ng/L**
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(28 - 101)
Fluorene d-10	73	(23 - 84)
Naphthalene-d8	84	(22 - 97)

NOTE(S):

J Estimated result. Result is less than RL.

City of Saint Louis Park

Client Sample ID: SLP4TFBD-111009

GC/MS Semivolatiles

Lot-Sample #...: D9K110561-011	**Work Order #...:** LN9EV1AA	**Matrix.....:** WG	
Date Sampled...: 11/10/09	**Date Received..:** 11/11/09		
Prep Date.....: 11/15/09	**Analysis Date..:** 12/02/09		
Prep Batch #...: 9319014	**Analysis Time..:** 20:33		
Dilution Factor: 1			
	Method.....: SW846 8270C SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	5.7	ng/L
Acenaphthylene	ND	4.8	ng/L
Acridine	ND	6.5	ng/L
Anthracene	ND	4.2	ng/L
Benzo(a)anthracene	**1.4 J**	**4.3**	**ng/L**
Benzo(b)fluoranthene	ND	4.7	ng/L
Benzo(k)fluoranthene	ND	4.1	ng/L
2,3-Benzofuran	ND	5.4	ng/L
Benzo(ghi)perylene	ND	6.2	ng/L
Benzo(a)pyrene	ND	2.5	ng/L
Benzo(e)pyrene	ND	4.3	ng/L
Benzo(b)thiophene	ND	5.2	ng/L
Biphenyl	ND	5.6	ng/L
Carbazole	ND	3.8	ng/L
Chrysene	**2.7 J**	**5.6**	**ng/L**
Dibenzo(a,h)anthracene	**1.5 J**	**5.9**	**ng/L**
Dibenzofuran	ND	5.7	ng/L
Dibenzothiophene	ND	4.1	ng/L
2,3-Dihydroindene	ND	5.0	ng/L
Fluoranthene	ND	4.6	ng/L
Fluorene	ND	4.1	ng/L
Indene	ND	4.7	ng/L
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L
Indole	ND	4.7	ng/L
2-Methylnaphthalene	ND	5.9	ng/L
1-Methylnaphthalene	ND	5.6	ng/L
Naphthalene	**1.6 J**	**8.6**	**ng/L**
Perylene	ND	3.8	ng/L
Phenanthrene	ND	6.3	ng/L
Pyrene	ND	4.2	ng/L
Quinoline	ND	9.0	ng/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	104 *	(28 - 101)
Fluorene d-10	76	(23 - 84)
Naphthalene-d8	86	(22 - 97)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

QC DATA ASSOCIATION SUMMARY

D9K110561

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	SW846 8270C		9318112	9318092
002	WG	SW846 8270C		9318112	9318092
003	WG	SW846 8270C		9318112	9318092
004	WG	SW846 8270C		9318112	9318092
005	WG	SW846 8270C		9318112	9318092
006	WG	SW846 8270C SIM		9319014	9319010
007	WG	SW846 8270C SIM		9319014	9319010
008	WG	SW846 8270C SIM		9319014	9319010
009	WG	SW846 8270C SIM		9319014	9319010
010	WG	SW846 8270C SIM		9319014	9319010
011	WG	SW846 8270C SIM		9319014	9319010

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LPHEW1AA **Matrix.....:** WATER
MB Lot-Sample #: D9K140000-112

Prep Date.....: 11/14/09 **Analysis Time..:** 12:33
Analysis Date..: 11/19/09 **Prep Batch #...:** 9318112
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Acridine	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
2,3-Benzofuran	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Benzo(e)pyrene	ND	10	ug/L	SW846 8270C
Benzo(b)thiophene	ND	10	ug/L	SW846 8270C
Biphenyl	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	10	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Dibenzothiophene	ND	10	ug/L	SW846 8270C
2,3-Dihydroindene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Indole	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
1-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Perylene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Quinoline	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	94	(30 - 160)
Fluorene d-10	71	(36 - 127)
Naphthalene-d8	45	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LPHEW1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9K140000-112 LPHEW1AD-LCSD
Prep Date.....: 11/14/09 Analysis Date..: 11/19/09
Prep Batch #...: 9318112 Analysis Time..: 13:09
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	54	(30 - 150)			SW846 8270C
	59	(30 - 150)	8.1	(0-30)	SW846 8270C
Acenaphthylene	55	(30 - 150)			SW846 8270C
	60	(30 - 150)	8.8	(0-30)	SW846 8270C
Acridine	87	(30 - 150)			SW846 8270C
	95	(30 - 150)	8.0	(0-30)	SW846 8270C
Anthracene	89	(30 - 150)			SW846 8270C
	93	(30 - 150)	4.4	(0-30)	SW846 8270C
Benzo(a)anthracene	97	(30 - 150)			SW846 8270C
	102	(30 - 150)	4.6	(0-30)	SW846 8270C
Benzo(b)fluoranthene	87	(30 - 150)			SW846 8270C
	88	(30 - 150)	1.1	(0-30)	SW846 8270C
Benzo(k)fluoranthene	86	(30 - 150)			SW846 8270C
	94	(30 - 150)	8.8	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	47	(30 - 150)			SW846 8270C
	49	(30 - 150)	3.9	(0-30)	SW846 8270C
Dibenz(a,h)acridine	84	(30 - 150)			SW846 8270C
	87	(30 - 150)	3.8	(0-30)	SW846 8270C
Dibenz(a,j)acridine	83	(30 - 150)			SW846 8270C
	89	(30 - 150)	6.6	(0-30)	SW846 8270C
2,3-Benzofuran	60	(30 - 150)			SW846 8270C
	64	(30 - 150)	6.0	(0-30)	SW846 8270C
Benzo(ghi)perylene	83	(30 - 150)			SW846 8270C
	85	(30 - 150)	2.3	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	46	(30 - 150)			SW846 8270C
	47	(30 - 150)	2.5	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	47	(30 - 150)			SW846 8270C
	48	(30 - 150)	3.1	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	41	(30 - 150)			SW846 8270C
	44	(30 - 150)	6.7	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	43	(30 - 150)			SW846 8270C
	45	(30 - 150)	3.8	(0-30)	SW846 8270C
Benzo(a)pyrene	87	(30 - 150)			SW846 8270C
	92	(30 - 150)	5.0	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	67	(30 - 150)			SW846 8270C
	70	(30 - 150)	4.1	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	46	(30 - 150)			SW846 8270C
	50	(30 - 150)	8.7	(0-30)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LPHEW1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9K140000-112 LPHEW1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	89	(30 - 150)			SW846 8270C
	94	(30 - 150)	4.7	(0-30)	SW846 8270C
Benzo(b)thiophene	54	(30 - 150)			SW846 8270C
	57	(30 - 150)	7.0	(0-30)	SW846 8270C
3-Methylcholanthrene	82	(30 - 150)			SW846 8270C
	87	(30 - 150)	5.7	(0-30)	SW846 8270C
6-Methylchrysene	55	(30 - 150)			SW846 8270C
	58	(30 - 150)	4.0	(0-30)	SW846 8270C
1-Methylphenanthrene	51	(30 - 150)			SW846 8270C
	53	(30 - 150)	3.3	(0-30)	SW846 8270C
Biphenyl	48	(30 - 150)			SW846 8270C
	51	(30 - 150)	7.7	(0-30)	SW846 8270C
Carbazole	89	(30 - 150)			SW846 8270C
	94	(30 - 150)	5.7	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalene	64	(30 - 150)			SW846 8270C
	70	(30 - 150)	8.3	(0-30)	SW846 8270C
Chrysene	96	(43 - 124)			SW846 8270C
	101	(43 - 124)	4.9	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	83	(30 - 150)			SW846 8270C
	86	(30 - 150)	4.7	(0-30)	SW846 8270C
Dibenzofuran	63	(30 - 150)			SW846 8270C
	70	(30 - 150)	9.4	(0-30)	SW846 8270C
Dibenzothiophene	85	(30 - 150)			SW846 8270C
	89	(30 - 150)	5.3	(0-30)	SW846 8270C
2,3-Dihydroindene	46	(30 - 150)			SW846 8270C
	48	(30 - 150)	4.2	(0-30)	SW846 8270C
Fluoranthene	84	(30 - 150)			SW846 8270C
	88	(30 - 150)	4.5	(0-30)	SW846 8270C
Fluorene	73	(51 - 120)			SW846 8270C
	79	(51 - 120)	8.3	(0-30)	SW846 8270C
Indene	51	(49 - 108)			SW846 8270C
	54	(49 - 108)	5.8	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	83	(30 - 150)			SW846 8270C
	86	(30 - 150)	3.1	(0-30)	SW846 8270C
Indole	81	(30 - 150)			SW846 8270C
	86	(30 - 150)	6.8	(0-30)	SW846 8270C
2-Methylnaphthalene	44 a	(47 - 138)			SW846 8270C
	47	(47 - 138)	5.5	(0-30)	SW846 8270C
1-Methylnaphthalene	45	(30 - 150)			SW846 8270C
	47	(30 - 150)	4.8	(0-30)	SW846 8270C
Naphthalene	49	(43 - 128)			SW846 8270C
	52	(43 - 128)	5.6	(0-30)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LPHEW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9K140000-112 LPHEW1AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**86**	**(30 - 150)**			**SW846 8270C**
	91	**(30 - 150)**	**5.5**	**(0-30)**	**SW846 8270C**
Phenanthrene	**86**	**(30 - 150)**			**SW846 8270C**
	90	**(30 - 150)**	**4.5**	**(0-30)**	**SW846 8270C**
Pyrene	**84**	**(30 - 150)**			**SW846 8270C**
	88	**(30 - 150)**	**4.4**	**(0-30)**	**SW846 8270C**
Quinoline	**85**	**(40 - 126)**			**SW846 8270C**
	91	**(40 - 126)**	**7.6**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	101	(30 - 160)
	107	(30 - 160)
Fluorene d-10	87	(36 - 127)
	92	(36 - 127)
Naphthalene-d8	77	(37 - 107)
	84	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LPHEW1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9K140000-112 LPHEW1AD-LCSD
Prep Date.....: 11/14/09 Analysis Date..: 11/19/09
Prep Batch #...: 9318112 Analysis Time..: 13:09
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	50.0	27.2	ug/L	54		SW846 8270C
	50.0	29.5	ug/L	59	8.1	SW846 8270C
Acenaphthylene	50.0	27.4	ug/L	55		SW846 8270C
	50.0	30.0	ug/L	60	8.8	SW846 8270C
Acridine	50.0	43.7	ug/L	87		SW846 8270C
	50.0	47.3	ug/L	95	8.0	SW846 8270C
Anthracene	50.0	44.4	ug/L	89		SW846 8270C
	50.0	46.4	ug/L	93	4.4	SW846 8270C
Benzo(a)anthracene	50.0	48.5	ug/L	97		SW846 8270C
	50.0	50.8	ug/L	102	4.6	SW846 8270C
Benzo(b)fluoranthene	50.0	43.3	ug/L	87		SW846 8270C
	50.0	43.8	ug/L	88	1.1	SW846 8270C
Benzo(k)fluoranthene	50.0	42.9	ug/L	86		SW846 8270C
	50.0	46.8	ug/L	94	8.8	SW846 8270C
7H-Dibenzo[c,g]carbazole	50.0	23.5	ug/L	47		SW846 8270C
	50.0	24.5	ug/L	49	3.9	SW846 8270C
Dibenz(a,h)acridine	50.0	41.8	ug/L	84		SW846 8270C
	50.0	43.4	ug/L	87	3.8	SW846 8270C
Dibenz(a,j)acridine	50.0	41.7	ug/L	83		SW846 8270C
	50.0	44.5	ug/L	89	6.6	SW846 8270C
2,3-Benzofuran	50.0	30.0	ug/L	60		SW846 8270C
	50.0	31.9	ug/L	64	6.0	SW846 8270C
Benzo(ghi)perylene	50.0	41.6	ug/L	83		SW846 8270C
	50.0	42.5	ug/L	85	2.3	SW846 8270C
Dibenzo(a,e)pyrene	50.0	23.0	ug/L	46		SW846 8270C
	50.0	23.6	ug/L	47	2.5	SW846 8270C
Dibenzo(a,i)pyrene	50.0	23.4	ug/L	47		SW846 8270C
	50.0	24.2	ug/L	48	3.1	SW846 8270C
Dibenzo(a,h)pyrene	50.0	20.7	ug/L	41		SW846 8270C
	50.0	22.1	ug/L	44	6.7	SW846 8270C
Dibenzo(a,l)pyrene	50.0	21.6	ug/L	43		SW846 8270C
	50.0	22.4	ug/L	45	3.8	SW846 8270C
Benzo(a)pyrene	50.0	43.7	ug/L	87		SW846 8270C
	50.0	46.0	ug/L	92	5.0	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	50.0	33.5	ug/L	67		SW846 8270C
	50.0	34.9	ug/L	70	4.1	SW846 8270C
2,6-Dimethylnaphthalene	50.0	22.8	ug/L	46		SW846 8270C
	50.0	24.8	ug/L	50	8.7	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LPHEW1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: D9K140000-112 LPHEW1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzo(e)pyrene	50.0	44.6	ug/L	89		SW846 8270C
	50.0	46.8	ug/L	94	4.7	SW846 8270C
Benzo(b)thiophene	50.0	26.8	ug/L	54		SW846 8270C
	50.0	28.7	ug/L	57	7.0	SW846 8270C
3-Methylcholanthrene	50.0	41.0	ug/L	82		SW846 8270C
	50.0	43.4	ug/L	87	5.7	SW846 8270C
6-Methylchrysene	50.0	27.7	ug/L	55		SW846 8270C
	50.0	28.8	ug/L	58	4.0	SW846 8270C
1-Methylphenanthrene	50.0	25.6	ug/L	51		SW846 8270C
	50.0	26.5	ug/L	53	3.3	SW846 8270C
Biphenyl	50.0	23.8	ug/L	48		SW846 8270C
	50.0	25.7	ug/L	51	7.7	SW846 8270C
Carbazole	50.0	44.3	ug/L	89		SW846 8270C
	50.0	46.9	ug/L	94	5.7	SW846 8270C
2,3,5-Trimethylnaphthalene	50.0	32.0	ug/L	64		SW846 8270C
	50.0	34.8	ug/L	70	8.3	SW846 8270C
Chrysene	50.0	48.0	ug/L	96		SW846 8270C
	50.0	50.5	ug/L	101	4.9	SW846 8270C
Dibenzo(a,h)anthracene	50.0	41.3	ug/L	83		SW846 8270C
	50.0	43.2	ug/L	86	4.7	SW846 8270C
Dibenzofuran	50.0	31.7	ug/L	63		SW846 8270C
	50.0	34.8	ug/L	70	9.4	SW846 8270C
Dibenzothiophene	50.0	42.4	ug/L	85		SW846 8270C
	50.0	44.7	ug/L	89	5.3	SW846 8270C
2,3-Dihydroindene	50.0	23.0	ug/L	46		SW846 8270C
	50.0	24.0	ug/L	48	4.2	SW846 8270C
Fluoranthene	50.0	42.2	ug/L	84		SW846 8270C
	50.0	44.2	ug/L	88	4.5	SW846 8270C
Fluorene	50.0	36.4	ug/L	73		SW846 8270C
	50.0	39.5	ug/L	79	8.3	SW846 8270C
Indene	50.0	25.5	ug/L	51		SW846 8270C
	50.0	27.0	ug/L	54	5.8	SW846 8270C
Indeno(1,2,3-cd)pyrene	50.0	41.7	ug/L	83		SW846 8270C
	50.0	43.0	ug/L	86	3.1	SW846 8270C
Indole	50.0	40.4	ug/L	81		SW846 8270C
	50.0	43.2	ug/L	86	6.8	SW846 8270C
2-Methylnaphthalene	50.0	22.2 a	ug/L	44		SW846 8270C
	50.0	23.5	ug/L	47	5.5	SW846 8270C
1-Methylnaphthalene	50.0	22.5	ug/L	45		SW846 8270C
	50.0	23.6	ug/L	47	4.8	SW846 8270C
Naphthalene	50.0	24.7	ug/L	49		SW846 8270C
	50.0	26.1	ug/L	52	5.6	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LPHEW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9K140000-112 LPHEW1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Perylene	**50.0**	**42.9**	**ug/L**	**86**		**SW846 8270C**
	50.0	**45.4**	**ug/L**	**91**	**5.5**	**SW846 8270C**
Phenanthrene	**50.0**	**42.8**	**ug/L**	**86**		**SW846 8270C**
	50.0	**44.8**	**ug/L**	**90**	**4.5**	**SW846 8270C**
Pyrene	**50.0**	**42.1**	**ug/L**	**84**		**SW846 8270C**
	50.0	**43.9**	**ug/L**	**88**	**4.4**	**SW846 8270C**
Quinoline	**50.0**	**42.3**	**ug/L**	**85**		**SW846 8270C**
	50.0	**45.6**	**ug/L**	**91**	**7.6**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	101	(30 - 160)
	107	(30 - 160)
Fluorene d-10	87	(36 - 127)
	92	(36 - 127)
Naphthalene-d8	77	(37 - 107)
	84	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9DL1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-001 LN9DL1AD-MSD
Date Sampled...: 11/10/09 Date Received..: 11/11/09
Prep Date.....: 11/14/09 Analysis Date..: 11/19/09
Prep Batch #...: 9318112 Analysis Time..: 16:45
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	394 a	(30 - 150)			SW846 8270C
	417 a	(30 - 150)	6.0	(0-30)	SW846 8270C
Acenaphthylene	80	(30 - 150)			SW846 8270C
	85	(30 - 150)	6.3	(0-30)	SW846 8270C
Acridine	86	(30 - 150)			SW846 8270C
	89	(30 - 150)	4.5	(0-30)	SW846 8270C
Anthracene	95	(30 - 150)			SW846 8270C
	96	(30 - 150)	0.89	(0-30)	SW846 8270C
Benzo(a)anthracene	90	(30 - 150)			SW846 8270C
	92	(30 - 150)	1.9	(0-30)	SW846 8270C
Benzo(b)fluoranthene	77	(30 - 150)			SW846 8270C
	83	(30 - 150)	8.4	(0-30)	SW846 8270C
Benzo(k)fluoranthene	81	(30 - 150)			SW846 8270C
	84	(30 - 150)	3.9	(0-30)	SW846 8270C
7H-Dibenzo[c,g]carbazole	44	(30 - 150)			SW846 8270C
	52	(30 - 150)	16	(0-30)	SW846 8270C
Dibenz(a,h)acridine	78	(30 - 150)			SW846 8270C
	87	(30 - 150)	11	(0-30)	SW846 8270C
Dibenz(a,j)acridine	73	(30 - 150)			SW846 8270C
	84	(30 - 150)	15	(0-30)	SW846 8270C
2,3-Benzofuran	56	(30 - 150)			SW846 8270C
	69	(30 - 150)	10	(0-30)	SW846 8270C
Benzo(ghi)perylene	76	(30 - 150)			SW846 8270C
	88	(30 - 150)	14	(0-30)	SW846 8270C
Dibenzo(a,e)pyrene	45	(30 - 150)			SW846 8270C
	55	(30 - 150)	20	(0-30)	SW846 8270C
Dibenzo(a,i)pyrene	48	(30 - 150)			SW846 8270C
	59	(30 - 150)	22	(0-30)	SW846 8270C
Dibenzo(a,h)pyrene	42	(30 - 150)			SW846 8270C
	54	(30 - 150)	26	(0-30)	SW846 8270C
Dibenzo(a,l)pyrene	44	(30 - 150)			SW846 8270C
	52	(30 - 150)	17	(0-30)	SW846 8270C
Benzo(a)pyrene	80	(30 - 150)			SW846 8270C
	85	(30 - 150)	6.0	(0-30)	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	70	(30 - 150)			SW846 8270C
	73	(30 - 150)	4.7	(0-30)	SW846 8270C
2,6-Dimethylnaphthalene	76	(30 - 150)			SW846 8270C
	83	(30 - 150)	6.7	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9DL1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-001 LN9DL1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	82	(30 - 150)			SW846 8270C
	87	(30 - 150)	7.3	(0-30)	SW846 8270C
Benzo(b)thiophene	49	(30 - 150)			SW846 8270C
	67	(30 - 150)	5.8	(0-30)	SW846 8270C
3-Methylcholanthrene	77	(30 - 150)			SW846 8270C
	83	(30 - 150)	8.5	(0-30)	SW846 8270C
6-Methylchrysene	52	(30 - 150)			SW846 8270C
	54	(30 - 150)	4.9	(0-30)	SW846 8270C
1-Methylphenanthrene	52	(30 - 150)			SW846 8270C
	53	(30 - 150)	2.6	(0-30)	SW846 8270C
Biphenyl	77	(30 - 150)			SW846 8270C
	84	(30 - 150)	6.2	(0-30)	SW846 8270C
Carbazole	74	(30 - 150)			SW846 8270C
	77	(30 - 150)	1.4	(0-30)	SW846 8270C
2,3,5-Trimethylnaphthalen	90	(30 - 150)			SW846 8270C
	92	(30 - 150)	3.0	(0-30)	SW846 8270C
Chrysene	85	(43 - 124)			SW846 8270C
	87	(43 - 124)	3.4	(0-30)	SW846 8270C
Dibenzo(a,h)anthracene	75	(30 - 150)			SW846 8270C
	85	(30 - 150)	13	(0-30)	SW846 8270C
Dibenzofuran	77	(30 - 150)			SW846 8270C
	86	(30 - 150)	4.7	(0-30)	SW846 8270C
Dibenzothiophene	85	(30 - 150)			SW846 8270C
	88	(30 - 150)	2.9	(0-30)	SW846 8270C
2,3-Dihydroindene	541 a	(30 - 150)			SW846 8270C
	589 a	(30 - 150)	8.9	(0-30)	SW846 8270C
Fluoranthene	84	(30 - 150)			SW846 8270C
	87	(30 - 150)	3.3	(0-30)	SW846 8270C
Fluorene	79	(51 - 120)			SW846 8270C
	88	(51 - 120)	4.0	(0-30)	SW846 8270C
Indene	51	(49 - 108)			SW846 8270C
	63	(49 - 108)	11	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	77	(30 - 150)			SW846 8270C
	87	(30 - 150)	12	(0-30)	SW846 8270C
Indole	55	(30 - 150)			SW846 8270C
	61	(30 - 150)	11	(0-30)	SW846 8270C
2-Methylnaphthalene	40 a	(47 - 138)			SW846 8270C
	68	(47 - 138)	7.6	(0-30)	SW846 8270C
1-Methylnaphthalene	397 a	(30 - 150)			SW846 8270C
	424 a	(30 - 150)	7.1	(0-30)	SW846 8270C
Naphthalene	2010 a	(43 - 128)			SW846 8270C
	2150 a	(43 - 128)	7.0	(0-30)	SW846 8270C

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LN9DL1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9K110561-001 LN9DL1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	79	(30 - 150)			SW846 8270C
	84	(30 - 150)	6.6	(0-30)	SW846 8270C
Phenanthrene	79	(30 - 150)			SW846 8270C
	83	(30 - 150)	2.5	(0-30)	SW846 8270C
Pyrene	84	(30 - 150)			SW846 8270C
	85	(30 - 150)	2.0	(0-30)	SW846 8270C
Quinoline	77	(40 - 126)			SW846 8270C
	93	(40 - 126)	19	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	32	(30 - 160)
	56	(30 - 160)
Fluorene d-10	89	(36 - 127)
	93	(36 - 127)
Naphthalene-d8	75	(37 - 107)
	78	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9DL1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-001 LN9DL1AD-MSD
Date Sampled...: 11/10/09 Date Received..: 11/11/09
Prep Date.....: 11/14/09 Analysis Date..: 11/19/09
Prep Batch #...: 9318112 Analysis Time..: 16:45
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene		47.1	186	ug/L	394 a		SW846 8270C
		47.3	197	ug/L	417 a	6.0	SW846 8270C
Acenaphthylene	ND	47.1	37.7	ug/L	80		SW846 8270C
	ND	47.3	40.2	ug/L	85	6.3	SW846 8270C
Acridine	ND	47.1	40.3	ug/L	86		SW846 8270C
	ND	47.3	42.1	ug/L	89	4.5	SW846 8270C
Anthracene	ND	47.1	44.8	ug/L	95		SW846 8270C
	ND	47.3	45.2	ug/L	96	0.89	SW846 8270C
Benzo(a)anthracene	ND	47.1	42.6	ug/L	90		SW846 8270C
	ND	47.3	43.4	ug/L	92	1.9	SW846 8270C
Benzo(b)fluoranthene	ND	47.1	36.2	ug/L	77		SW846 8270C
	ND	47.3	39.4	ug/L	83	8.4	SW846 8270C
Benzo(k)fluoranthene	ND	47.1	38.2	ug/L	81		SW846 8270C
	ND	47.3	39.7	ug/L	84	3.9	SW846 8270C
7H-Dibenzo[c,g]carbazole	ND	47.1	20.9	ug/L	44		SW846 8270C
	ND	47.3	24.5	ug/L	52	16	SW846 8270C
Dibenz(a,h)acridine	ND	47.1	36.9	ug/L	78		SW846 8270C
	ND	47.3	41.3	ug/L	87	11	SW846 8270C
Dibenz(a,j)acridine	ND	47.1	34.2	ug/L	73		SW846 8270C
	ND	47.3	39.7	ug/L	84	15	SW846 8270C
2,3-Benzofuran	31	47.1	57.2	ug/L	56		SW846 8270C
	31	47.3	63.5	ug/L	69	10	SW846 8270C
Benzo(ghi)perylene	ND	47.1	36.0	ug/L	76		SW846 8270C
	ND	47.3	41.4	ug/L	88	14	SW846 8270C
Dibenzo(a,e)pyrene	ND	47.1	21.3	ug/L	45		SW846 8270C
	ND	47.3	26.1	ug/L	55	20	SW846 8270C
Dibenzo(a,i)pyrene	ND	47.1	22.4	ug/L	48		SW846 8270C
	ND	47.3	28.0	ug/L	59	22	SW846 8270C
Dibenzo(a,h)pyrene	ND	47.1	19.6	ug/L	42		SW846 8270C
	ND	47.3	25.4	ug/L	54	26	SW846 8270C
Dibenzo(a,l)pyrene	ND	47.1	20.6	ug/L	44		SW846 8270C
	ND	47.3	24.4	ug/L	52	17	SW846 8270C
Benzo(a)pyrene	ND	47.1	37.9	ug/L	80		SW846 8270C
	ND	47.3	40.2	ug/L	85	6.0	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	47.1	33.0	ug/L	70		SW846 8270C
	ND	47.3	34.6	ug/L	73	4.7	SW846 8270C
2,6-Dimethylnaphthalene	15	47.1	51.0	ug/L	76		SW846 8270C
	15	47.3	54.6	ug/L	83	6.7	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9DL1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-001 LN9DL1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(e)pyrene	ND	47.1	38.4	ug/L	82		SW846 8270C
	ND	47.3	41.3	ug/L	87	7.3	SW846 8270C
Benzo(b)thiophene	120	47.1	143	ug/L	49		SW846 8270C
	120	47.3	151	ug/L	67	5.8	SW846 8270C
3-Methylcholanthrene	ND	47.1	36.2	ug/L	77		SW846 8270C
	ND	47.3	39.5	ug/L	83	8.5	SW846 8270C
6-Methylchrysene	ND	47.1	24.3	ug/L	52		SW846 8270C
	ND	47.3	25.5	ug/L	54	4.9	SW846 8270C
1-Methylphenanthrene	ND	47.1	24.5	ug/L	52		SW846 8270C
	ND	47.3	25.2	ug/L	53	2.6	SW846 8270C
Biphenyl	19	47.1	54.7	ug/L	77		SW846 8270C
	19	47.3	58.2	ug/L	84	6.2	SW846 8270C
Carbazole	91	47.1	126	ug/L	74		SW846 8270C
	91	47.3	127	ug/L	77	1.4	SW846 8270C
2,3,5-Trimethylnaphthalen	ND	47.1	42.4	ug/L	90		SW846 8270C
	ND	47.3	43.6	ug/L	92	3.0	SW846 8270C
Chrysene	ND	47.1	39.9	ug/L	85		SW846 8270C
	ND	47.3	41.3	ug/L	87	3.4	SW846 8270C
Dibenzo(a,h)anthracene	ND	47.1	35.5	ug/L	75		SW846 8270C
	ND	47.3	40.4	ug/L	85	13	SW846 8270C
Dibenzofuran	57	47.1	93.3	ug/L	77		SW846 8270C
	57	47.3	97.9	ug/L	86	4.7	SW846 8270C
Dibenzothiophene	15	47.1	55.3	ug/L	85		SW846 8270C
	15	47.3	56.9	ug/L	88	2.9	SW846 8270C
2,3-Dihydroindene		47.1	255	ug/L	541 a		SW846 8270C
		47.3	278	ug/L	589 a	8.9	SW846 8270C
Fluoranthene	1.4	47.1	41.0	ug/L	84		SW846 8270C
	1.4	47.3	42.4	ug/L	87	3.3	SW846 8270C
Fluorene	62	47.1	99.4	ug/L	79		SW846 8270C
	62	47.3	104	ug/L	88	4.0	SW846 8270C
Indene	26	47.1	50.4	ug/L	51		SW846 8270C
	26	47.3	56.1	ug/L	63	11	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	47.1	36.4	ug/L	77		SW846 8270C
	ND	47.3	41.2	ug/L	87	12	SW846 8270C
Indole	ND	47.1	25.7	ug/L	55		SW846 8270C
	ND	47.3	28.8	ug/L	61	11	SW846 8270C
2-Methylnaphthalene	150	47.1	169	ug/L	40 a		SW846 8270C
	150	47.3	182	ug/L	68	7.6	SW846 8270C
1-Methylnaphthalene		47.1	187	ug/L	397 a		SW846 8270C
		47.3	200	ug/L	424 a	7.1	SW846 8270C
Naphthalene		47.1	946	ug/L	2010 a		SW846 8270C
		47.3	1020	ug/L	2150 a	7.0	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LN9DL1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9K110561-001 LN9DL1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perylene	ND	47.1	37.2	ug/L	79		SW846 8270C
	ND	47.3	39.7	ug/L	84	6.6	SW846 8270C
Phenanthrene	48	47.1	84.5	ug/L	79		SW846 8270C
	48	47.3	86.6	ug/L	83	2.5	SW846 8270C
Pyrene	ND	47.1	39.6	ug/L	84		SW846 8270C
	ND	47.3	40.4	ug/L	85	2.0	SW846 8270C
Quinoline	ND	47.1	36.3	ug/L	77		SW846 8270C
	ND	47.3	43.8	ug/L	93	19	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	32	(30 - 160)
	56	(30 - 160)
Fluorene d-10	89	(36 - 127)
	93	(36 - 127)
Naphthalene-d8	75	(37 - 107)
	78	(37 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LPJF51AA **Matrix.....:** WATER
MB Lot-Sample #: D9K150000-014

Prep Date.....: 11/15/09 **Analysis Time..:** 12:48
Analysis Date..: 12/02/09 **Prep Batch #...:** 9319014
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.7	ng/L	SW846 8270C SIM
Acenaphthylene	ND	4.8	ng/L	SW846 8270C SIM
Acridine	ND	6.5	ng/L	SW846 8270C SIM
Anthracene	ND	4.2	ng/L	SW846 8270C SIM
Benzo(a)anthracene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)fluoranthene	ND	4.7	ng/L	SW846 8270C SIM
Benzo(k)fluoranthene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Benzofuran	ND	5.4	ng/L	SW846 8270C SIM
Benzo(ghi)perylene	ND	6.2	ng/L	SW846 8270C SIM
Benzo(a)pyrene	ND	2.5	ng/L	SW846 8270C SIM
Benzo(e)pyrene	ND	4.3	ng/L	SW846 8270C SIM
Benzo(b)thiophene	ND	5.2	ng/L	SW846 8270C SIM
Biphenyl	ND	5.6	ng/L	SW846 8270C SIM
Carbazole	ND	3.8	ng/L	SW846 8270C SIM
Chrysene	ND	5.6	ng/L	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	5.9	ng/L	SW846 8270C SIM
Dibenzofuran	ND	5.7	ng/L	SW846 8270C SIM
Dibenzothiophene	ND	4.1	ng/L	SW846 8270C SIM
2,3-Dihydroindene	ND	5.0	ng/L	SW846 8270C SIM
Fluoranthene	ND	4.6	ng/L	SW846 8270C SIM
Fluorene	ND	4.1	ng/L	SW846 8270C SIM
Indene	ND	4.7	ng/L	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	5.4	ng/L	SW846 8270C SIM
Indole	ND	4.7	ng/L	SW846 8270C SIM
2-Methylnaphthalene	ND	5.9	ng/L	SW846 8270C SIM
1-Methylnaphthalene	ND	5.6	ng/L	SW846 8270C SIM
Naphthalene	ND	8.6	ng/L	SW846 8270C SIM
Perylene	ND	3.8	ng/L	SW846 8270C SIM
Phenanthrene	ND	6.3	ng/L	SW846 8270C SIM
Pyrene	ND	4.2	ng/L	SW846 8270C SIM
Quinoline	ND	9.0	ng/L	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	112 *	(28 - 101)
Fluorene d-10	79	(23 - 84)
Naphthalene-d8	88	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LPJF51AC Matrix.....: WATER
LCS Lot-Sample#: D9K150000-014
Prep Date.....: 11/15/09 Analysis Date..: 12/02/09
Prep Batch #...: 9319014 Analysis Time..: 13:23
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	82	(30 - 150)	SW846 8270C SIM
Acenaphthylene	61	(30 - 150)	SW846 8270C SIM
Acridine	0.0 a	(30 - 150)	SW846 8270C SIM
Anthracene	66	(30 - 150)	SW846 8270C SIM
Benzo(a)anthracene	66	(30 - 150)	SW846 8270C SIM
Benzo(b)fluoranthene	81	(30 - 150)	SW846 8270C SIM
Benzo(k)fluoranthene	82	(30 - 150)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	61	(30 - 150)	SW846 8270C SIM
Dibenz(a,h)acridine	57	(30 - 150)	SW846 8270C SIM
Dibenz(a,j)acridine	13 a	(30 - 150)	SW846 8270C SIM
2,3-Benzofuran	91	(30 - 150)	SW846 8270C SIM
Benzo(ghi)perylene	65	(30 - 150)	SW846 8270C SIM
Dibenzo(a,e)pyrene	40	(30 - 150)	SW846 8270C SIM
Dibenzo(a,i)pyrene	39	(30 - 150)	SW846 8270C SIM
Dibenzo(a,h)pyrene	28 a	(30 - 150)	SW846 8270C SIM
Dibenzo(a,l)pyrene	32	(30 - 150)	SW846 8270C SIM
Benzo(a)pyrene	68	(30 - 150)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	54	(30 - 150)	SW846 8270C SIM
2,6-Dimethylnaphthalene	77	(30 - 150)	SW846 8270C SIM
Benzo(e)pyrene	83	(37 - 105)	SW846 8270C SIM
Benzo(b)thiophene	88	(30 - 150)	SW846 8270C SIM
3-Methylcholanthrene	44	(30 - 150)	SW846 8270C SIM
6-Methylchrysene	71	(30 - 150)	SW846 8270C SIM
1-Methylphenanthrene	78	(30 - 150)	SW846 8270C SIM
Biphenyl	84	(30 - 150)	SW846 8270C SIM
Carbazole	74	(30 - 150)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	75	(30 - 150)	SW846 8270C SIM
Chrysene	92	(20 - 136)	SW846 8270C SIM
Dibenzo(a,h)anthracene	69	(30 - 150)	SW846 8270C SIM
Dibenzofuran	86	(30 - 150)	SW846 8270C SIM
Dibenzothiophene	84	(30 - 150)	SW846 8270C SIM
2,3-Dihydroindene	80	(30 - 150)	SW846 8270C SIM
Fluoranthene	76	(30 - 150)	SW846 8270C SIM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LPJF51AC **Matrix.....:** WATER
LCS Lot-Sample#: D9K150000-014

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Fluorene	**81**	**(34 - 96)**	**SW846 8270C SIM**
Indene	**79**	**(22 - 86)**	**SW846 8270C SIM**
Indeno(1,2,3-cd)pyrene	**66**	**(30 - 150)**	**SW846 8270C SIM**
Indole	**73**	**(30 - 150)**	**SW846 8270C SIM**
2-Methylnaphthalene	**83**	**(25 - 95)**	**SW846 8270C SIM**
1-Methylnaphthalene	**84**	**(30 - 150)**	**SW846 8270C SIM**
Naphthalene	**87**	**(27 - 95)**	**SW846 8270C SIM**
Perylene	**82**	**(30 - 150)**	**SW846 8270C SIM**
Phenanthrene	**87**	**(30 - 150)**	**SW846 8270C SIM**
Pyrene	**76**	**(30 - 150)**	**SW846 8270C SIM**
Quinoline	**51**	**(20 - 112)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(28 - 101)
Fluorene d-10	80	(23 - 84)
Naphthalene-d8	88	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LPJF51AC Matrix.....: WATER
LCS Lot-Sample#: D9K150000-014
Prep Date.....: 11/15/09 Analysis Date..: 12/02/09
Prep Batch #...: 9319014 Analysis Time..: 13:23
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	75.0	61.3	ng/L	82	SW846 8270C S
Acenaphthylene	75.0	46.1	ng/L	61	SW846 8270C S
Acridine	75.0	0.0 a	ng/L	0.0	SW846 8270C S
Anthracene	75.0	49.4	ng/L	66	SW846 8270C S
Benzo(a)anthracene	75.0	49.8	ng/L	66	SW846 8270C S
Benzo(b)fluoranthene	75.0	60.6	ng/L	81	SW846 8270C S
Benzo(k)fluoranthene	75.0	61.7	ng/L	82	SW846 8270C S
7H-Dibenzo[c,g]carbazole	75.0	46.0	ng/L	61	SW846 8270C S
Dibenz(a,h)acridine	75.0	43.0	ng/L	57	SW846 8270C S
Dibenz(a,j)acridine	75.0	10.0 a	ng/L	13	SW846 8270C S
2,3-Benzofuran	75.0	68.3	ng/L	91	SW846 8270C S
Benzo(ghi)perylene	75.0	49.0	ng/L	65	SW846 8270C S
Dibenzo(a,e)pyrene	75.0	29.8	ng/L	40	SW846 8270C S
Dibenzo(a,i)pyrene	75.0	29.2	ng/L	39	SW846 8270C S
Dibenzo(a,h)pyrene	75.0	20.9 a	ng/L	28	SW846 8270C S
Dibenzo(a,l)pyrene	75.0	23.7	ng/L	32	SW846 8270C S
Benzo(a)pyrene	75.0	50.8	ng/L	68	SW846 8270C S
7,12-Dimethylbenz(a)-anthracene	75.0	40.4	ng/L	54	SW846 8270C S
2,6-Dimethylnaphthalene	75.0	57.6	ng/L	77	SW846 8270C S
Benzo(e)pyrene	75.0	62.0	ng/L	83	SW846 8270C S
Benzo(b)thiophene	75.0	66.3	ng/L	88	SW846 8270C S
3-Methylcholanthrene	75.0	33.0	ng/L	44	SW846 8270C S
6-Methylchrysene	75.0	53.3	ng/L	71	SW846 8270C S
1-Methylphenanthrene	75.0	58.7	ng/L	78	SW846 8270C S
Biphenyl	75.0	63.2	ng/L	84	SW846 8270C S
Carbazole	75.0	55.4	ng/L	74	SW846 8270C S
2,3,5-Trimethylnaphthalen	75.0	56.6	ng/L	75	SW846 8270C S
Chrysene	75.0	69.0	ng/L	92	SW846 8270C S
Dibenzo(a,h)anthracene	75.0	51.9	ng/L	69	SW846 8270C S
Dibenzofuran	75.0	64.6	ng/L	86	SW846 8270C S
Dibenzothiophene	75.0	63.4	ng/L	84	SW846 8270C S
2,3-Dihydroindene	75.0	60.0	ng/L	80	SW846 8270C S
Fluoranthene	75.0	57.0	ng/L	76	SW846 8270C S

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LPJF51AC **Matrix.....:** WATER
LCS Lot-Sample#: D9K150000-014

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Fluorene	75.0	60.8	ng/L	81	SW846 8270C S
Indene	75.0	59.2	ng/L	79	SW846 8270C S
Indeno(1,2,3-cd)pyrene	75.0	49.1	ng/L	66	SW846 8270C S
Indole	75.0	54.4	ng/L	73	SW846 8270C S
2-Methylnaphthalene	75.0	62.3	ng/L	83	SW846 8270C S
1-Methylnaphthalene	75.0	63.2	ng/L	84	SW846 8270C S
Naphthalene	75.0	65.1	ng/L	87	SW846 8270C S
Perylene	75.0	61.2	ng/L	82	SW846 8270C S
Phenanthrene	75.0	65.3	ng/L	87	SW846 8270C S
Pyrene	75.0	56.9	ng/L	76	SW846 8270C S
Quinoline	75.0	38.3	ng/L	51	SW846 8270C S

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	91	(28 - 101)
Fluorene d-10	80	(23 - 84)
Naphthalene-d8	88	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9EN1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-008 LN9EN1AD-MSD
Date Sampled...: 11/10/09 Date Received..: 11/11/09
Prep Date.....: 11/15/09 Analysis Date..: 12/02/09
Prep Batch #...: 9319014 Analysis Time..: 18:09
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	77	(30 - 150)			SW846 8270C SIM
	79	(30 - 150)	1.3	(0-50)	SW846 8270C SIM
Acenaphthylene	67	(30 - 150)			SW846 8270C SIM
	67	(30 - 150)	4.2	(0-50)	SW846 8270C SIM
Acridine	51	(30 - 150)			SW846 8270C SIM
	39	(30 - 150)	29	(0-50)	SW846 8270C SIM
Anthracene	70	(30 - 150)			SW846 8270C SIM
	55	(30 - 150)	28	(0-50)	SW846 8270C SIM
Benzo(a)anthracene	37	(30 - 150)			SW846 8270C SIM
	34	(30 - 150)	12	(0-50)	SW846 8270C SIM
Benzo(b)fluoranthene	11 a	(30 - 150)			SW846 8270C SIM
	7.7 a	(30 - 150)	37	(0-50)	SW846 8270C SIM
Benzo(k)fluoranthene	9.4 a	(30 - 150)			SW846 8270C SIM
	8.3 a	(30 - 150)	16	(0-50)	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	5.4 a	(30 - 150)			SW846 8270C SIM
	4.1 a	(30 - 150)	30	(0-50)	SW846 8270C SIM
Dibenz(a,h)acridine	6.4 a	(30 - 150)			SW846 8270C SIM
	5.3 a	(30 - 150)	22	(0-50)	SW846 8270C SIM
Dibenz(a,j)acridine	3.9 a	(30 - 150)			SW846 8270C SIM
	3.1 a	(30 - 150)	28	(0-50)	SW846 8270C SIM
2,3-Benzofuran	85	(30 - 150)			SW846 8270C SIM
	86	(30 - 150)	1.9	(0-50)	SW846 8270C SIM
Benzo(ghi)perylene	3.7 a	(30 - 150)			SW846 8270C SIM
	3.6 a	(30 - 150)	5.6	(0-50)	SW846 8270C SIM
Dibenzo(a,e)pyrene	2.4 a	(30 - 150)			SW846 8270C SIM
	2.1 a	(30 - 150)	17	(0-50)	SW846 8270C SIM
Dibenzo(a,i)pyrene	2.3 a	(30 - 150)			SW846 8270C SIM
	0.93 a,p	(30 - 150)	89	(0-50)	SW846 8270C SIM
Dibenzo(a,h)pyrene	1.2 a	(30 - 150)			SW846 8270C SIM
	0.0	(30 - 150)	200	(0-50)	SW846 8270C SIM
Dibenzo(a,l)pyrene	6.2 a	(30 - 150)			SW846 8270C SIM
	3.6 a,p	(30 - 150)	56	(0-50)	SW846 8270C SIM
Benzo(a)pyrene	6.6 a	(30 - 150)			SW846 8270C SIM
	4.0 a,p	(30 - 150)	53	(0-50)	SW846 8270C SIM
7,12-Dimethylbenz(a)-anthracene	71	(30 - 150)			SW846 8270C SIM
	29 a,p	(30 - 150)	87	(0-50)	SW846 8270C SIM
2,6-Dimethylnaphthalene	74	(30 - 150)			SW846 8270C SIM
	76	(30 - 150)	1.1	(0-50)	SW846 8270C SIM

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9EN1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-008 LN9EN1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzo(e)pyrene	8.3 a	(37 - 105)			SW846 8270C SIM
	6.8 a	(37 - 105)	23	(0-50)	SW846 8270C SIM
Benzo(b)thiophene	83	(30 - 150)			SW846 8270C SIM
	84	(30 - 150)	1.8	(0-50)	SW846 8270C SIM
3-Methylcholanthrene	6.9 a	(30 - 150)			SW846 8270C SIM
	0.0	(30 - 150)	200	(0-50)	SW846 8270C SIM
6-Methylchrysene	22 a	(30 - 150)			SW846 8270C SIM
	19 a	(30 - 150)	18	(0-50)	SW846 8270C SIM
1-Methylphenanthrene	79	(30 - 150)			SW846 8270C SIM
	82	(30 - 150)	0.41	(0-50)	SW846 8270C SIM
Biphenyl	79	(30 - 150)			SW846 8270C SIM
	81	(30 - 150)	0.88	(0-50)	SW846 8270C SIM
Carbazole	81	(30 - 150)			SW846 8270C SIM
	85	(30 - 150)	1.2	(0-50)	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	72	(30 - 150)			SW846 8270C SIM
	75	(30 - 150)	0.50	(0-50)	SW846 8270C SIM
Chrysene	41	(20 - 136)			SW846 8270C SIM
	38	(20 - 136)	9.4	(0-50)	SW846 8270C SIM
Dibenzo(a,h)anthracene	3.5 a	(30 - 150)			SW846 8270C SIM
	3.9 a	(30 - 150)	7.1	(0-50)	SW846 8270C SIM
Dibenzofuran	81	(30 - 150)			SW846 8270C SIM
	84	(30 - 150)	0.03	(0-50)	SW846 8270C SIM
Dibenzothiophene	79	(30 - 150)			SW846 8270C SIM
	82	(30 - 150)	0.92	(0-50)	SW846 8270C SIM
2,3-Dihydroindene	77	(30 - 150)			SW846 8270C SIM
	79	(30 - 150)	0.16	(0-50)	SW846 8270C SIM
Fluoranthene	79	(30 - 150)			SW846 8270C SIM
	82	(30 - 150)	0.70	(0-50)	SW846 8270C SIM
Fluorene	74	(34 - 96)			SW846 8270C SIM
	78	(34 - 96)	1.4	(0-50)	SW846 8270C SIM
Indene	76	(22 - 86)			SW846 8270C SIM
	74	(22 - 86)	6.0	(0-50)	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	3.7 a	(30 - 150)			SW846 8270C SIM
	3.6 a	(30 - 150)	6.5	(0-50)	SW846 8270C SIM
Indole	74	(30 - 150)			SW846 8270C SIM
	58	(30 - 150)	28	(0-50)	SW846 8270C SIM
2-Methylnaphthalene	79	(25 - 95)			SW846 8270C SIM
	81	(25 - 95)	1.9	(0-50)	SW846 8270C SIM
1-Methylnaphthalene	80	(30 - 150)			SW846 8270C SIM
	81	(30 - 150)	1.4	(0-50)	SW846 8270C SIM
Naphthalene	80	(27 - 95)			SW846 8270C SIM
	81	(27 - 95)	1.5	(0-50)	SW846 8270C SIM

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LN9EN1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9K110561-008 LN9EN1AD-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perylene	**8.5 a**	**(30 - 150)**			**SW846 8270C SIM**
	6.2 a	**(30 - 150)**	**35**	**(0-50)**	**SW846 8270C SIM**
Phenanthrene	**80**	**(30 - 150)**			**SW846 8270C SIM**
	84	**(30 - 150)**	**1.4**	**(0-50)**	**SW846 8270C SIM**
Pyrene	**78**	**(30 - 150)**			**SW846 8270C SIM**
	79	**(30 - 150)**	**2.6**	**(0-50)**	**SW846 8270C SIM**
Quinoline	**71**	**(20 - 112)**			**SW846 8270C SIM**
	75	**(20 - 112)**	**2.1**	**(0-50)**	**SW846 8270C SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	46	(28 - 101)
	42	(28 - 101)
Fluorene d-10	75	(23 - 84)
	76	(23 - 84)
Naphthalene-d8	82	(22 - 97)
	83	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9EN1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-008 LN9EN1AD-MSD
Date Sampled...: 11/10/09 Date Received..: 11/11/09
Prep Date.....: 11/15/09 Analysis Date..: 12/02/09
Prep Batch #...: 9319014 Analysis Time..: 18:09
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	79.1	61.1	ng/L	77		SW846 8270C SIM
	ND	76.3	60.3	ng/L	79	1.3	SW846 8270C SIM
Acenaphthylene	ND	79.1	53.0	ng/L	67		SW846 8270C SIM
	ND	76.3	50.9	ng/L	67	4.2	SW846 8270C SIM
Acridine	ND	79.1	40.1	ng/L	51		SW846 8270C SIM
	ND	76.3	29.8	ng/L	39	29	SW846 8270C SIM
Anthracene	ND	79.1	55.3	ng/L	70		SW846 8270C SIM
	ND	76.3	41.6	ng/L	55	28	SW846 8270C SIM
Benzo(a)anthracene	ND	79.1	29.0	ng/L	37		SW846 8270C SIM
	ND	76.3	25.7	ng/L	34	12	SW846 8270C SIM
Benzo(b)fluoranthene	ND	79.1	8.47	ng/L	11 a		SW846 8270C SIM
	ND	76.3	5.84	ng/L	7.7 a	37	SW846 8270C SIM
Benzo(k)fluoranthene	ND	79.1	7.42	ng/L	9.4 a		SW846 8270C SIM
	ND	76.3	6.35	ng/L	8.3 a	16	SW846 8270C SIM
7H-Dibenzo[c,g]carbazole	ND	79.1	4.24	ng/L	5.4 a		SW846 8270C SIM
	ND	76.3	3.15	ng/L	4.1 a	30	SW846 8270C SIM
Dibenz(a,h)acridine	ND	79.1	5.03	ng/L	6.4 a		SW846 8270C SIM
	ND	76.3	4.02	ng/L	5.3 a	22	SW846 8270C SIM
Dibenz(a,j)acridine	ND	79.1	3.11	ng/L	3.9 a		SW846 8270C SIM
	ND	76.3	2.34	ng/L	3.1 a	28	SW846 8270C SIM
2,3-Benzofuran	ND	79.1	67.1	ng/L	85		SW846 8270C SIM
	ND	76.3	65.8	ng/L	86	1.9	SW846 8270C SIM
Benzo(ghi)perylene	ND	79.1	2.91	ng/L	3.7 a		SW846 8270C SIM
	ND	76.3	2.75	ng/L	3.6 a	5.6	SW846 8270C SIM
Dibenzo(a,e)pyrene	ND	79.1	1.90	ng/L	2.4 a		SW846 8270C SIM
	ND	76.3	1.60	ng/L	2.1 a	17	SW846 8270C SIM
Dibenzo(a,i)pyrene	ND	79.1	1.85	ng/L	2.3 a		SW846 8270C SIM
	ND	76.3	0.706	ng/L	0.93	89	SW846 8270C SIM
	Qualifiers: a,p						
Dibenzo(a,h)pyrene	ND	79.1	0.964	ng/L	1.2 a		SW846 8270C SIM
	ND	76.3		ng/L	0.0	200	SW846 8270C SIM
Dibenzo(a,l)pyrene	ND	79.1	4.89	ng/L	6.2 a		SW846 8270C SIM
	ND	76.3	2.76	ng/L	3.6	56	SW846 8270C SIM
	Qualifiers: a,p						
Benzo(a)pyrene	ND	79.1	5.20	ng/L	6.6 a		SW846 8270C SIM
	ND	76.3	3.04	ng/L	4.0	53	SW846 8270C SIM
	Qualifiers: a,p						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 Work Order #...: LN9EN1AC-MS Matrix.....: WG
MS Lot-Sample #: D9K110561-008 LN9EN1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
7,12-Dimethylbenz(a)-anthracene	ND	79.1	56.4	ng/L	71		SW846 8270C SIM
	ND	76.3	22.1	ng/L	29 a,p	87	SW846 8270C SIM
2,6-Dimethylnaphthalene	ND	79.1	58.7	ng/L	74		SW846 8270C SIM
	ND	76.3	58.0	ng/L	76	1.1	SW846 8270C SIM
Benzo(e)pyrene	ND	79.1	6.59	ng/L	8.3 a		SW846 8270C SIM
	ND	76.3	5.22	ng/L	6.8 a	23	SW846 8270C SIM
Benzo(b)thiophene	ND	79.1	65.3	ng/L	83		SW846 8270C SIM
	ND	76.3	64.1	ng/L	84	1.8	SW846 8270C SIM
3-Methylcholanthrene	ND	79.1	5.46	ng/L	6.9 a		SW846 8270C SIM
	ND	76.3		ng/L	0.0	200	SW846 8270C SIM
6-Methylchrysene	ND	79.1	17.3	ng/L	22 a		SW846 8270C SIM
	ND	76.3	14.4	ng/L	19 a	18	SW846 8270C SIM
1-Methylphenanthrene	ND	79.1	62.9	ng/L	79		SW846 8270C SIM
	ND	76.3	62.6	ng/L	82	0.41	SW846 8270C SIM
Biphenyl	ND	79.1	62.3	ng/L	79		SW846 8270C SIM
	ND	76.3	61.8	ng/L	81	0.88	SW846 8270C SIM
Carbazole	ND	79.1	64.4	ng/L	81		SW846 8270C SIM
	ND	76.3	65.2	ng/L	85	1.2	SW846 8270C SIM
2,3,5-Trimethylnaphthalen	ND	79.1	57.2	ng/L	72		SW846 8270C SIM
	ND	76.3	56.9	ng/L	75	0.50	SW846 8270C SIM
Chrysene	1.3	79.1	33.7	ng/L	41		SW846 8270C SIM
	1.3	76.3	30.7	ng/L	38	9.4	SW846 8270C SIM
Dibenzo(a,h)anthracene	ND	79.1	2.75	ng/L	3.5 a		SW846 8270C SIM
	ND	76.3	2.95	ng/L	3.9 a	7.1	SW846 8270C SIM
Dibenzofuran	ND	79.1	64.0	ng/L	81		SW846 8270C SIM
	ND	76.3	64.1	ng/L	84	0.03	SW846 8270C SIM
Dibenzothiophene	ND	79.1	62.8	ng/L	79		SW846 8270C SIM
	ND	76.3	62.2	ng/L	82	0.92	SW846 8270C SIM
2,3-Dihydroindene	ND	79.1	60.7	ng/L	77		SW846 8270C SIM
	ND	76.3	60.6	ng/L	79	0.16	SW846 8270C SIM
Fluoranthene	ND	79.1	62.8	ng/L	79		SW846 8270C SIM
	ND	76.3	62.3	ng/L	82	0.70	SW846 8270C SIM
Fluorene	ND	79.1	58.7	ng/L	74		SW846 8270C SIM
	ND	76.3	59.5	ng/L	78	1.4	SW846 8270C SIM
Indene	ND	79.1	60.1	ng/L	76		SW846 8270C SIM
	ND	76.3	56.6	ng/L	74	6.0	SW846 8270C SIM
Indeno(1,2,3-cd)pyrene	ND	79.1	2.92	ng/L	3.7 a		SW846 8270C SIM
	ND	76.3	2.74	ng/L	3.6 a	6.5	SW846 8270C SIM
Indole	ND	79.1	58.5	ng/L	74		SW846 8270C SIM
	ND	76.3	44.4	ng/L	58	28	SW846 8270C SIM

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9K110561 **Work Order #...:** LN9EN1AC-MS **Matrix.....:** WG
MS Lot-Sample #: D9K110561-008 LN9EN1AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2-Methylnaphthalene	ND	79.1	62.6	ng/L	79		SW846 8270C SIM
	ND	76.3	61.5	ng/L	81	1.9	SW846 8270C SIM
1-Methylnaphthalene	ND	79.1	62.9	ng/L	80		SW846 8270C SIM
	ND	76.3	62.0	ng/L	81	1.4	SW846 8270C SIM
Naphthalene	1.6	79.1	64.6	ng/L	80		SW846 8270C SIM
	1.6	76.3	63.7	ng/L	81	1.5	SW846 8270C SIM
Perylene	ND	79.1	6.70	ng/L	8.5 a		SW846 8270C SIM
	ND	76.3	4.70	ng/L	6.2 a	35	SW846 8270C SIM
Phenanthrene	ND	79.1	63.0	ng/L	80		SW846 8270C SIM
	ND	76.3	63.9	ng/L	84	1.4	SW846 8270C SIM
Pyrene	ND	79.1	62.0	ng/L	78		SW846 8270C SIM
	ND	76.3	60.4	ng/L	79	2.6	SW846 8270C SIM
Quinoline	ND	79.1	56.2	ng/L	71		SW846 8270C SIM
	ND	76.3	57.4	ng/L	75	2.1	SW846 8270C SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Chrysene-d12	46	(28 - 101)
	42	(28 - 101)
Fluorene d-10	75	(23 - 84)
	76	(23 - 84)
Naphthalene-d8	82	(22 - 97)
	83	(22 - 97)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	11/10/09	119192
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 2 of 2
3752 Wooddale Ave.	952-924-2448		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416	Dan Phelps	Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAcl/NaOH	Analysis: PAH PPTS	Special Instructions/ Conditions of Receipt
SLP4TFBD-111009	11/10/09	1225		X			6						X	
SLP4TMS-111009	↓	1240		↓			↓						X	
SLP4TMSD-111009	↓	1245		↓			↓						X	

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	11/10/09	1500	1. Received By	11/11/9	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID 3 4 2-3 2.9

Temperature on Receipt 4.9 4.1 2.8

Drinking Water? Yes ☐ No ☐ 11/11/09 Yes IR2AB

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
City of St. Louis Park	Scott Anderson	11/10/09	119497
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
3752 Wooddale Ave.	952-924-2558		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
St. Louis Park / MN / 55416	Dan Phelps	Lisa U.	
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly / MN			
Contract/Purchase Order/Quote No.			
01620-037			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PAH-PPB	PAH-PPTS
W420-111009	11/10/09	1040		X			2						X	
W420D-111009		1045											X	
W420FB-111009		1030											X	
W420FBD-111009		1035											X	
W420MS-111009		1050											X	
W420MSD-111009		1055											X	
W421-111009		1100											X	
W48-111009		1105					6							X
SLP6-111009		0930												X
SLP4T-111009		1230												X
SLP4TD-111009		1235												X
SLP4TFB-111009		1220												X

Special Instructions/ Conditions of Receipt

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	11/10/09	1500	1. Received By	11/11/9	09.30
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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Memorandum

Date: March 10, 2010

To: Bill Gregg

From: Drew Tarara

Subject: Data Quality Assessment/Validation
PPT/PPB PAH Analyses
City of St. Louis Park
St. Louis Park, MN
Lot # D9K110561
Appendix N

Distribution: File 60145681 File

SUMMARY

A data quality assessment was performed on the data for the analysis of four aqueous samples and two field blanks for part per trillion (ppt) polynuclear aromatic hydrocarbons (PAHs) by SW-846 method 8270C SIM and three aqueous samples and two field blanks for part per billion (ppb) PAH by 8270C. The samples were collected on November 10, 2009 at the City of St. Louis Park Reilly Tar site in St. Louis Park, MN. The samples were submitted to TestAmerica in Arvada, CO for analysis. TestAmerica processed and reported the results under lot number D9K110561.

The sample results were assessed according to the "Region 5 Standard Operating Procedure for Validation of CLP Organic Data" (2/1997), and the "Quality Assurance Project Plan for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly Industries, Inc. NPL Site, St. Louis Park, Minnesota", 12/2008. Modification of the data validation guidance was done to accommodate the non-CLP methodology.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated due to nonconformances of certain quality control (QC) criteria.

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
W420-111009	W420D-111009
W420FB-111009	W420FBD-111009
W421-111009	W48-111009
SLP6-111009	SLP4T-111009
SLP4TD-111009	SLP4TFB-111009

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Sample IDs	Sample IDs
SLP4TFBD-111009	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Laboratory blanks/field blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The samples were extracted and analyzed within the method specified holding times.

The cooler temperatures as measured upon sample receipt were within the acceptance criteria of 4± 2°C.

Laboratory Method Blanks/Field Blanks

No target analytes were detected in laboratory method blank 9318112 or 9319014.

Field blanks SLP4TFB-111009 and SLP4TFBD-111009 had a number of compounds above detection limits. The parent samples only had one or two compounds detected. This indicates that either a labeling error or previously opened de-ionized water containers was used for the field blanks. In either case, the concentrations were at or below the reporting limits or below 5x the reporting limits. No action was taken.

Surrogate Spike Recoveries

The surrogate percent recoveries (%R) were within the QC acceptance criteria in all sample analyses with the exception of three samples. The surrogate percent recovery outside (below) the acceptance criteria was chrysene-d12 in two cases. No action was required since the remaining two base/neutral

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surrogates were within QC recovery limits in each case. Sample SLP4TD-111009 has two surrogates outside the acceptance criteria on the high side (Fluorene-d10 and Naphthalene-d8).

MS/MSD Results

MS/MSD analyses were performed on samples W420-031209 and SLP6-031209. All target compounds were spiked for the MS/MSD analyses. The following table summarizes the percent recoveries (%Rs) and relative percent differences (RPDs) that fell outside the QC acceptance criteria.

Compound	MS/MSD		QC Limits		Actions	
	%R	RPD	%R	RPD	Detects	Nondetects
Acenaphthene(MS)	394		30-150		J	UJ
Acenaphthene(MSD)	417		30-150		J	UJ
2,3-Dihydroindene (MS)	541		30-150		J	UJ
2,3-Dihydroindene (MSD)	589		30-150		J	UJ
1-Methylnaphthalene (MS)	397		30-150		J	UJ
1-Methylnaphthalene (MSD)	424		30-150		J	UJ
Naphthalene (MS)	2010		30-150		J	UJ
Naphthalene (MSD)	2150		30-150		J	UJ
Associated samples: W420-111009						
Compound	**MS/MSD**		**QC Limits**		**Actions**	
	%R	**RPD**	**%R**	**RPD**	**Detects**	**Nondetects**
Benzo(b)fluoranthene (MS)	11		30-150		J	UJ
Benzo(b)fluoranthene (MSD)	7.7	37	30-150	0-25	J	UJ
Benzo(k)fluoranthene (MS)	9.4		30-150		J	UJ
Benzo(k)fluoranthene (MSD)	8.3		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MS)	5.4		30-150		J	UJ
7H-Dibenzo(c,g)carbozole (MSD)	4.1	30	30-150	0-25	J	UJ
Dibenz (a,h) acridine (MS)	6.4		30-150		J	UJ
Dibenz (a,h) acridine (MSD)	5.3		30-150		J	UJ
Dibenz (a, j) acridine (MS)	3.9		30-150		J	UJ
Dibenz (a, j) acridine (MSD)	3.1	28	30-150	0-25	J	UJ
Benzo(ghi)perylene (MS)	3.7		30-150		J	UJ
Benzo(ghi)perylene (MSD)	3.6		30-150		J	UJ

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Dibenzo (a, e) pyrene (MS)	2.4		30-150		J	UJ
Dibenzo (a, e) pyrene (MSD)	2.1		30-150		J	UJ
Dibenzo (a, i) pyrene (MS)	2.3		30-150		J	UJ
Dibenzo (a, i) pyrene (MSD)	0.93	89	30-150	0-25	J	UJ
Dibenzo (a, h) pyrene (MS)	1.2		30-150		J	UJ
Dibenzo (a, h) pyrene (MSD)	0.0	200	30-150	0-25	J	UJ
Dibenzo (a, l) pyrene (MS)	6.2		30-150		J	UJ
Dibenzo (a, l) pyrene (MSD)	3.6	56	30-150	0-25	J	UJ
Benzo(a)pyrene (MS)	6.6		30-150		J	UJ
Benzo(a)pyrene (MSD)	4.0	53	30-150	0-25	J	UJ
7,12-Dimethylbenz(a)-anthracene(MSD)	29	87	30-150	0-25	J	UJ
Benzo(e)pyrene (MS)	8.3		30-150		J	UJ
Benzo(e)pyrene (MSD)	6.8		30-150		J	UJ
3-Methylcholanthrene (MS)	6.9		30-150		J	UJ
3-Methylcholanthrene (MSD)	0.0	200	30-150	0-25	J	UJ
6-Methylchrysene (MS)	22		30-150		J	UJ
6-Methylchrysene (MSD)	19		30-150		J	UJ
Dibenzo(a,h)anthracene (MS)	3.5		30-150		J	UJ
Dibenzo(a,h)anthracene (MSD)	3.9		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MS)	3.7		30-150		J	UJ
Indeno(1,2,3-cd)pyrene (MSD)	3.6		30-150		J	UJ
Perylene (MS)	8.5		30-150		J	UJ
Perylene (MSD)	6.2	35	30-150	0-25	J	UJ
Associated samples: SLP4T-111009						

The RPD ranges reported in the lab package are incorrect for the MS/MSD. They should be 0-25 and not 0-50. No action was taken, but the lab will be informed prior to the next sampling round.

LCS Results

The following table summarizes the %Rs that fell below the QC acceptance criteria for the LCS analysis.

Compound	%R	QC Limits	Actions

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	(RPD)	(RPD Limits)	Detects	Nondetects
Acridine	0.0	30-150	J	UJ
Dibenz (a, j) acridine	13	30-150	J	UJ
Dibenz (a, j) acridine	28	30-150	J	UJ
Associated samples: SLP4T-111009				

Field Duplicate Results

Samples W420-111009/W420D-111009 and SLP4T-111009/SLP4TD-111009 were the field duplicate pairs analyzed with this data set.

A total of 15 of 31 and 3 of 31 compounds were detected. All RPDs were within the acceptance criteria.

Sample Quantitation/Detection Limit Results

Sample calculations were spot checked. No discrepancies were noted. The QAPP specified reporting limits were met for all samples.

Samples W420-111009, W420D-111009, and W421-111009 were initially analyzed undiluted. The results of some compounds fell outside the calibration range. The samples were then diluted at 4x and 20x to obtain all target analytes within the calibration range.

It should be noted that the laboratory's LIMs system is designed to use nominal values in the reporting of the SQLs. A nominal value of one liter is used to calculate the SQLs when the actual volume extracted is within ± 20% of this nominal value. The reporting limits are not adjusted for the actual volumes used unless the initial volume is outside this ± 20% rule.